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NEW JERSEY
STATE TEACHERS COLLEGE
AT MONTCLAIR

GRADUATE BULLETIN

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BULLETIN

OF THE

New Jersey State Teachers College at Montclair

GRADUATE DIVISION

NEW JERSEY STATE TEACHERS COLLEGE

Montclair

1951

TABLE OF CONTENTS

	<i>Page</i>
Officers of Administration	5
Graduate Faculty	6
GENERAL INFORMATION	7
History	7
Location	7
Library	7
Living Accommodations	8
Administration	8
Purposes	8
Organization	9
Student Teaching	10
Matriculation	10
Advanced Credits	10
Student Load	11
Requirements for A. M. Degree	11
General Restrictions	12
Fees and Service Charges	13
The Master's Thesis	13
Fields of Work	14
DEPARTMENT OF BUSINESS EDUCATION	15
DEPARTMENT OF ENGLISH	24
DEPARTMENT OF FOREIGN LANGUAGES	39
DEPARTMENT OF INTEGRATION	41
DEPARTMENT OF MATHEMATICS	57
DEPARTMENT OF SCIENCE	68
DEPARTMENT OF SOCIAL STUDIES	82
OTHER COURSES THAT MAY BE USED AS	
ELECTIVES	102
Art	102
Geography	103
Music	106
Health Education	110
Physical Education	111
Recreation	112
Colleges from Which Graduate Students Now Matriculated	
Received Their Baccalaureate Degree	113

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GENERAL INFORMATION

HISTORY

In 1908 the Montclair State Teachers College first began its teacher-education program as a two-year Normal School. In 1927, by act of the State Board of Education, it was changed to a State Teachers College with four-year curricula leading to a Bachelor of Arts degree and certification to teach in the secondary schools of the State. That the College might better serve teachers in service, extension courses were instituted in 1929 and summer sessions in 1930. The fact that hundreds of teachers in service registered in these programs annually shows the wisdom of the State Department in instituting them. The majority of these teachers held Bachelor's degrees, and they wished to continue their preparation and receive graduate credit for their work. They, therefore, requested that the College offer courses for graduate credit. To meet this demand, the Commissioner of Education recommended and the State Board of Education voted in June, 1932, that such work be offered and the College be empowered to grant the degree of Master of Arts. Graduate courses were first offered at the State Teachers College at Montclair in the summer of 1932 and have been offered in all regular and summer sessions since. There are now more than six hundred students matriculated in the Graduate Division.

LOCATION

The College is located on the northern edge of Upper Montclair about three miles from Montclair Center. The campus is on the boundary line between Essex and Passaic Counties. Valley Road, the main thoroughfare between Montclair and Paterson, bounds the campus on the east; to the west is the ridge of Watchung Mountain; to the north are Great Notch and Paterson; to the south, Montclair, Newark, and the Oranges.

The College may be reached by the Lackawanna Railroad to Montclair, thence by bus to the campus; by the Erie Railroad to Montclair Heights Station; and by bus from most of the cities in Northeastern New Jersey.

LIBRARY

A library of more than 48,000 volumes is conveniently situated on the main floor of the College Hall. This includes the following special collections: the Howe Collection of Organ Music; the Mark Andrews Music Library; the Webster Memorial Collection of

Modern Poetry; the Finley Collection of Science Textbooks, which has been augmented by early textbooks from other sources; the Carnegie Secondary Art Set of books and pictures. In addition, a Textbook Exhibit of more than 2,500 volumes, and a collection of courses of study from states, counties, towns, and cities throughout the country are valuable aids to teachers in training as well as to teachers in service.

Approximately 200 periodicals are received currently. In addition, the library maintains files of pictures, pamphlets and clippings, classified by subject. All of the library's holdings, with the exception of the Webster Memorial Collection, are available for loan to members of the faculty and the student body, and to graduates and former students.

LIVING ACCOMMODATIONS

During the College year graduate students are accommodated in the dormitories whenever possible. The rate for the Summer Sessions is \$13.50 a week including room, breakfast and dinner. These charges are subject to revision.

ADMINISTRATION

The graduate program of the College is administered with the assistance of two college committees: the Graduate Committee appointed by the President of the College, and the Administrative Council which consists of the President, the Dean of Instruction, the Director of Admissions, the Chairman of the Graduate Committee, the Director of Personnel and Guidance, and the heads of the major departments. The Chairman of the Graduate Committee assists in the administration of the Graduate Division.

PURPOSES

The New Jersey State Teachers College at Montclair is a professional school devoted primarily to the interests of secondary education. This definite objective is the controlling factor in the development of the curricula, teaching procedures, extra-curricular activities, and college spirit, and tends to unify all the activities of the college—professional, cultural, and social.

Graduate courses are organized to serve the purposes of two groups of students :

Those who wish to matriculate for the degree of Master of Arts :
Graduates of liberal arts and professional colleges.

Secondary teachers, supervisors, principals, and other school administrators.

Those who do not wish to matriculate for the degree :

Students who hold graduate degrees but wish to continue their professional preparation.

College graduates who wish to take courses leading toward secondary school certification.

Students who are matriculated in other colleges and universities and plan to transfer their credits.

Students taking courses for cultural purposes without reference to credit.

ORGANIZATION

The work is so organized as to meet the needs of those who wish to do full-time work and of those who are teaching and wish to take courses in the late afternoon, evening, or on Saturday morning. The courses in the Part-Time and Extension Division and Summer Sessions are given by members of the college staff and are granted resident credit. It is thus possible for a teacher in service to earn the Master's degree without taking a leave of absence from his teaching position.

In order to meet the needs of those candidates lacking secondary certification, many of the professional courses required for certification in the State of New Jersey can be taken on the graduate level. Students holding Bachelors' degrees from other colleges are permitted to matriculate for the Master's degree here prior to obtaining certification; but by the time the degree is to be conferred, they must have qualified for a teaching certificate. In all major departments except that of the Department of Integration this must be a secondary teaching certificate. Students who are working for certification are, therefore, advised to write to the Secretary of the State Board of Examiners, 175 West State Street, Trenton, New Jersey, submitting a transcript of all their previous college work asking for an evaluation as to what they are lacking for certification.

Inasmuch as no graduate credit is given for supervised student teaching, graduate students from liberal arts colleges spend, as a rule, at least a college year and a summer term to meet the State requirements for certification and the academic requirements for the Master's degree. The time required depends upon the character and amount of undergraduate credits.

STUDENT TEACHING

Graduates of other colleges who wish to do their student teaching through the New Jersey State Teachers College at Montclair should obtain from the Integration Office the mimeographed statement outlining the conditions under which it can be done.

MATRICULATION

The steps in the matriculation process are as follows:

1. The candidate secures from the Graduate Office an application which must be completed and returned to that office.
2. The candidate will have his college send official transcripts of all undergraduate credits (if the applicant is not a graduate of Montclair), to the Chairman of the Graduate Committee.
3. After the application and transcripts have been received in the Graduate Office, the candidate will be invited to confer with the Chairman of the Graduate Committee.
4. The candidate will next confer with the graduate adviser in the department in which he expects to do his work, and the adviser will develop a program of courses with him.
5. The candidate will then have a final brief conference with the Chairman of the Graduate Committee. Following this, the candidate will be advised in writing of the decision of the Graduate Committee and will be furnished with a statement of the work to be completed.

Final action on all applicants is vested in the Administrative Council.

Announcements are made with the offerings of courses each semester as to when the departmental advisers and the Chairman of the Graduate Committee may be consulted.

ADVANCED CREDITS

For graduates of institutions other than the New Jersey State Teachers Colleges, a minimum of thirty-two semester-hours of residence work is required. In the case of graduates of the New Jersey State Teachers Colleges a maximum of eight semester-hours of graduate work from other accredited institutions may be offered toward the Master's degree.

In the cases of students who are eligible to transfer credits from other institutions of work done prior to matriculation, official transcripts of these credits must be submitted for consideration to the Graduate Committee on Admissions.

Candidates who are eligible to take work at other graduate schools and who desire to do so after matriculation must first secure written permission from the head of the department concerned at Montclair and from the Chairman of the Graduate Committee, if the credits so gained are to be applied toward the Master's degree.

Not more than eight semester-hours of graduate credit will be granted for work taken at Montclair prior to matriculation. For this reason, candidates should apply for matriculation before the completion of that amount of work.

STUDENT LOAD

Graduate work should involve careful and intensive study with ample time to explore areas which may warrant further study.

Twelve to sixteen hours of work per semester is considered a full-time program for the graduate student in residence.

For teachers employed full time, six semester-hours of work in any one semester shall be the maximum load with four semester-hours being recommended.

In the regular six-week summer session, the maximum load shall be eight semester-hours. The Graduate Committee strongly recommends that the student consider six semester-hours of work a full program.

REQUIREMENTS FOR A.M. DEGREE

Thirty-two semester-hours of graduate credit are required for the Master of Arts degree.

Each student selects a major field in which he must complete such courses as are prescribed.

Each department except that of Integration requires at least thirty semester-hours of credit in its field as a prerequisite to matriculation.

After matriculation, the Integration Department requires twenty-four semester-hours in its field; all other departments require a minimum of eighteen semester-hours.

For graduates of teachers colleges, at least six semester-hours of the required total must be taken in the Department of Integration. The amount of such work required of graduates of other colleges is determined by the number of courses needed for certification. INTEGRATION 503 is required of all students matriculated in the Graduate Division.

Four of the total credits may be satisfied by a thesis which meets the approval of the Graduate Committee.

Students not submitting a thesis take a departmental examination, which may be both written and oral. This examination is given by the department in which the student does his major work. No academic credit is given for this examination.

An average of "B" or better is required for work submitted for the Master's degree. No credit is given for work below "C."

With the exception of those graduates majoring in Administration and Supervision or in Personnel and Guidance, a prerequisite to the conferment of the degree is the fulfillment of all State requirements for certification to teach the major subject in the high school. In the Integration Department either an elementary or a secondary teaching certificate is prerequisite to the conferment of the degree.

Students who desire to meet the State requirement in Supervised Student Teaching must register for that course with the Assistant in Graduate Personnel.

Work for the degree must be completed within five years of the date of matriculation. Candidates must file with the Registrar an application for conferment of the degree before November 30 of the college year in which the work is to be completed. Application blanks for this purpose may be secured from the Registrar. The burden of responsibility for the request rests with the candidate. This is of special significance to the teacher in service who may have distributed the graduate work over four or five years.

GENERAL RESTRICTIONS

No credit is granted for :

1. Correspondence work.
2. Junior-college courses.
3. Graduate courses with mark below "C."
4. Supervised teaching.
5. More than eight semester-hours of graduate credit taken at Montclair prior to matriculation.
6. The comprehensive departmental examination.
7. More than six semester-hours of graduate credit earned in extension (off-campus) courses.
8. Graduate work taken elsewhere unless the student is a graduate of one of the New Jersey State Teachers Colleges, and in such cases not more than eight points.

FEES AND SERVICE CHARGES

Eight dollars (\$8.00) per semester-hour to those who have not yet taught regularly as public school teachers.

Eleven dollars (\$11.00) per semester-hour to those who are teaching or who have taught regularly as public school teachers.

Thirteen dollars (\$13.00) per semester-hour to non-residents of the State of New Jersey.

Diploma, three dollars (\$3.00).

Registration Service Charge, one dollar (\$1.00) per semester.

Late Registration Service Charge, two dollars (\$2.00) collected on all registrations made subsequent to the days set aside for registration each semester.

Supervised Student Teaching (if required), forty-eight dollars (\$48.00).

A Laboratory Service Charge is made in connection with each of the laboratory courses.

Dormitory fees including room, breakfast and dinner for a summer session, thirteen and one-half dollars (\$13.50) a week.

These charges are subject to revision.

All charges except the diploma charge are payable during the registration period.

THE MASTER'S THESIS

Students writing a thesis must register with the Chairman of the Graduate Committee for course GRADUATE 500, *Master's Thesis*.

The following information is of aid to students submitting Master's theses:

a. Choice of Topic and Plan of Research.

Each student submitting a thesis shall discuss the choice of topic and the plan for doing the work with the head of the department in which he is specializing. As soon as he has chosen the topic and has made tentative plans for his research, the head of the department appoints a sponsor who acts as his guide.

b. Presentation of Plan.

Each student submitting a thesis shall present in detail his plan of research and thesis to his sponsor, the Graduate Committee, the head of the department concerned, and the Dean of Instruction.

c. Mechanics of the Thesis.

Standard for such mechanical details as paging, diagrams, references, bibliography, titles, etc., are set by the Graduate Committee. The Librarian shall be consulted as to bibliographic form.

d. Submitting the Thesis.

As soon as the thesis is completed, a typewritten copy is submitted to the sponsor. If he approves it, he submits it to the Reading Committee at a date no later than six weeks before the date of graduation. If approved by the Reading Committee, it is returned to the candidate, who makes such changes as have been recommended and presents three typewritten copies to the head of the department at least two weeks before the date of graduation. Final acceptance rests with the Administrative Council.

e. An acceptable thesis shall show evidence that:

1. The candidate has comprehended the essentials of his problem, followed a well-organized plan of work, and offered satisfactory solutions.
2. The candidate has made an independent and intensive study of his problem.
3. The candidate has made a comprehensive study of the literature of his subject.
4. The candidate's conclusions are justified by his findings.
5. The candidate has a practical working knowledge of research methods.
6. The thesis is not a duplicate of a similar study.
7. The data involves a sufficient fund of information to make the findings significant.
8. The thesis is of definite value to the teaching profession.

FIELDS OF WORK

Majors in graduate work are offered in the fields of Administration and Supervision, Biology, Business Education, English, Mathematics, Personnel and Guidance, Physical Science, Science, and Social Studies. In each curriculum there is a core of educational courses and major subject-matter courses. The amount of each type depends on the candidate's undergraduate work and is determined by the student's graduate committee. The work in Administration and Supervision and in Personnel and Guidance is limited largely to professional courses in order to meet the State certification requirements.

Students choosing a major field of study at the graduate level should keep in mind that certain experience requirements are needed in the fields of Administration and Supervision and Personnel and Guidance. Enrollment in certain Integration courses is limited to those who are having or who have had actual teaching experience. For details see page 41.

DEPARTMENT OF BUSINESS EDUCATION

The graduate work in the Department of Business Education is designed to prepare teachers of business education for administrative, supervisory, specialized work or master teaching in the field of business education. In order to attain these objectives the candidate has an opportunity to supplement his undergraduate program and to explore advanced areas of work, this work to be determined in accordance with the individual background, experience, and achievement of the candidate.

Graduate work toward the Master of Arts degree in Business Education presupposes the completion of an undergraduate major in business education, or its equivalent. The undergraduate major is based on the requirements as established by the New Jersey State Board of Education. For further details see the undergraduate bulletin.

In lieu of four of the thirty-two semester-hours of credit required for the Master of Arts degree, the candidate may write a thesis giving the results of some study in the field of business education or its teaching. This study may be made only after consultation with the Head of the Business Education Department. The study is completed under the sponsorship of a member of the Business Education Department faculty. Plans should be made to have such a study in its final form and approved by the Department of Business Education by May 1st of the year in which the degree is expected to be conferred. The thesis may be substituted only for courses listed under Division III as described under the course requirements.

All candidates for the Master of Arts degree in Business Education must pass a comprehensive examination before they are granted the degree. This examination is given the first Saturday in April and the last Saturday in July for those candidates anticipating graduation. It is general in nature and is intended to test the candidate's maturity of thought with respect to business education and the teaching of business education.

COURSE REQUIREMENTS

The basic plan of the program is made up of four divisions with graduate courses bearing 500 or 600 numbers and senior-graduate courses bearing 400 numbers.

Division I. Required Professionalized Business Education Courses (6 sem. hrs.)

B. E. 502.	Principles and Problems of Business Education	2 s. h.
B. E. 503.	Administration and Supervision of Business Education	2 s. h.
B. E. 504.	Improvement of Instruction in Business Education	2 s. h.

Division II. Required Seminar in Economics (6 sem. hrs.)

B. E. 602.	Seminar in Economics	6 s. h.
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Division III. Elective Subject Matter Courses (14 sem. hrs.)

These may be selected from those courses listed below :

Group A—Business Education Department Courses (8 to 14 s. h.)

B. E. 402, 404, 405, 406, 407A, 407B, 408, 409, 410A, 410B, 411, 412, 413, 414, 415, 420

B. E. 511, 512, 513, 514A, 514B, 515A, 515B, 516, 517A, 517B, 518, 519A, 519B

Group B—Geography, Mathematics, and Social Studies Department Courses (up to 6 s. h.)

Other courses may be substituted for those in this group with the permission of the Head of the Business Education Department. Such substitution will be permitted only if it contributes to what may be considered the basic training requirements of a business education teacher.

Geog. 409, 410, 413, 414A, 414B, 503, 504, 509

Math. 410, 505

Soc. St. 413, 446, 450, 454, 455, 456, 517, 522, 523, 524

Division IV. Integration Department Courses (6 sem. hrs.)

Group A—(2 sem. hrs. required)

Int. 503.	Methods and Instruments of Research	2 s. h.
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Group B—(4 sem. hrs. of elective credits—Select two courses)

Int. 408, 409, 500A, 500B, 500C, 504A, 505, 521A, 521B, 535A, 536, 537, 538, 549, 551, 553

For information relative to eligibility for enrollment in Integration courses, see regulations outlined on page 41.

THE GRADUATE COURSES

BUSINESS EDUCATION 502. *Principles and Problems of Business Education*

The purpose of this course is to survey the basic principles and practices of business education. Among the topics considered are: the high school business program, developing courses of study, factors in curriculum construction, attitudes of management and labor toward education, and the relationship of general education to business education.

Credit: 2 semester-hours

BUSINESS EDUCATION 503. *Administration and Supervision of Business Education*

This course offers an opportunity to study the problems of organizing, directing, and supervising business education programs. Such matters as the functions of the administrator and supervisor of business education, textbook selection, teacher selection, testing programs, conferences, and equipment and layout are considered.

Credit: 2 semester-hours

BUSINESS EDUCATION 504. *Improvement of Instruction in Business Education*

This course seeks to bring together business education teachers regardless of subject matter fields to consider common problems involving general subject matter and methods of instruction including visual and auditory aids. It also offers opportunity for an individual to investigate and evaluate materials and methods in specific subject matter areas.

Credit: 2 semester-hours

BUSINESS EDUCATION 511. *Auditing*

This course seeks to develop the meaning and techniques of auditing procedure. It includes practice in the fundamental mechanics of auditing as well as in the making of the formal report on an audit.

Prerequisite: 8 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 512. *Tax Accounting*

The primary purpose of this course is to give a comprehensive picture of the Federal Tax structure, and to provide training in the application of basic principles to specific problems of the individual and corporation.

Prerequisite: 6 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 513. *Labor Problems*

This course provides an opportunity to study Federal and State Labor Laws and regulations. It also includes consideration of such matters as arbitration, collective bargaining, labor organizations, the labor contract, personnel management, and case problems.

Credit: 2 semester-hours

BUSINESS EDUCATION 514A. *Marketing Processes I*

The emphasis in this course centers about the application of the basic principles of marketing to specific case problems involving market institutions (brokers, auctions, exchanges, wholesalers, retailers, chains, cooperatives, and mail-order houses). Commodity marketing of farm products, industrial goods, and service industries are studied.

Credit: 2 semester-hours

BUSINESS EDUCATION 514B. *Marketing Processes II*

This course is a continuation of 514A, but course 514A is not a prerequisite. Some of the topics are: margins and expenses, turnover, market research, marketing policies, finance and credit policies, government regulations and competition. The case-problem approach is used predominantly.

Credit: 2 semester-hours

BUSINESS EDUCATION 515A. *Textiles I*

This course is important for its consumer and technical values. It develops selling points for textiles by furnishing a great deal of product information. Each student learns to classify and recognize various fabrics and their weaves.

Credit: 2 semester-hours

BUSINESS EDUCATION 515B. *Textiles II*

This course is a continuation of 515A, but course 515A is not a prerequisite. Emphasis is placed on the selection of appropriate fabrics for various types of clothing and for home furnishings including rugs.

Credit: 2 semester-hours

BUSINESS EDUCATION 516. *Business Organization and Management II*

The problem approach is used in this advanced course in considering such topics as ownership, finances, location and layouts, purchasing personnel, and managerial controls.

Credit: 2 semester-hours

BUSINESS EDUCATION 517A. *Advanced Business Law Cases I*

This course presupposes a knowledge of the basic principles of business law. It is designed to furnish a broader understanding and background in areas requiring considerable training to be effective in the classroom. Cases are concerned with the topics of contracts, negotiable instruments, and insurance.

Credit: 2 semester-hours

BUSINESS EDUCATION 517B. *Advanced Business Law Cases II*

This advanced law course is a continuation of B. E. 517A, but course 517A is not a prerequisite. A basic knowledge of the principles of law is, however, required. The course includes a further study of law cases pertaining to bailments, carriers, sales, property, landlord and tenant, torts, and business crimes.

Credit: 2 semester-hours

BUSINESS EDUCATION 518. *Advertising II*

This advanced course in advertising offers an opportunity to study in some detail the uses of various advertising media such as newspapers, magazines, radio, television, and direct mail, and to evaluate their effectiveness in terms of campaigns.

Credit: 2 semester-hours

BUSINESS EDUCATION 519A. *Advanced Accounting I*

The content of this course emphasizes an intensive study of the items making up accounting statements and the principles of valuation and income determination. Problem solving is an integral part of the course. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 519B. *Advanced Accounting II*

This course is a continuation of B. E. 519A, but course 519A is not a prerequisite. Topics treated include consignments, agency and branch accounting, consolidations, receivership accounting, estate and trust accounting. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 602. *Seminar in Economics*

This seminar is designed to meet the individual needs of the graduate student in business education or social studies by allowing him to pursue areas of work along economic lines in which he is not well versed. The program of participation consists of oral and written reports, developed through independent reading and individually directed field studies. In addition, group field trips are planned so as to give the student a first-hand knowledge of methods and practices of such organizations as banks, organized exchanges, manufacturing and marketing businesses. It is expected that the reports arising from these experiences will be in such form that they will be capable of being published or delivered as speeches before groups of people. An opportunity is given to view, evaluate, and work with, a variety of related visual and auditory aids.

Credit: 6 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

BUSINESS EDUCATION 401. *The Teaching of Business Education*

In this course a study is made of the history and development of business education, aims or objectives, human learning processes, lesson plans, teaching procedures, tests and measurements, and special helps for the teachers of business education.

Credit: 3 semester-hours

BUSINESS EDUCATION 402. *Salesmanship*

The principles of salesmanship in all types of selling activities are discussed. They are amplified and strengthened by individual selling demonstrations which require intensive study of the product to be sold in the demonstration and careful analysis of the desirable techniques for its sale. Visual aids and talks by salesmen, sales managers, and retail training directors add interest and purposefulness to the course.

Credit: 4 semester-hours

BUSINESS EDUCATION 404. *Business Economics*

This course deals with the business aspects of economics as related to contemporary and long range problems; operation and government control of public utilities; taxation, government finance, and labor and management problems.

Credit: 2 semester-hours

BUSINESS EDUCATION 405. *Marketing*

Marketing is the process of transferring goods from the producer to the consumer. The functions involved in this process, the various channels of distribution, marketing institutions, and the costs of marketing are considered in this course.

Credit: 2 semester-hours

BUSINESS EDUCATION 406. *Advertising I*

This course aims to acquaint the student with the social and economic aspects of advertising so that a fair evaluation may be made of its worth as well as its undesirable aspects. Copy appeals, the writing of copy, advertising layouts, and the selection of appropriate types of media for various advertisements are considered.

Credit: 2 semester-hours

BUSINESS EDUCATION 407A. *Consumer Education I*

This is a general introductory course designed to meet current needs for greater economic efficiency as outlined by the National Educational Policies Commission. The general objective of this course is to help improve the ability of individuals to choose and to buy economic goods and services so that standards of living may be raised. Some of the topics considered are: personal budgeting; the general art of buymanship; the cooperative movement; consumer standards and grade labels; weights and measures; governmental and producer aids for consumers; the wise buying of shelter, insurance, and investments; the intelligent use of installment buying and other forms of credit; and a general survey of the agencies for educating the consumer.

Credit: 2 semester-hours

BUSINESS EDUCATION 407B. *Consumer Education II*

This course is a continuation of Business Education 407A, but course 407A is not a prerequisite. The emphasis is on the economics of consumption with particular attention given to an analysis of the factors and forces back of consumer demand, such as custom, fashion, and advertising.

Credit: 2 semester-hours

BUSINESS EDUCATION 408. *Business Finance*

This course deals with the processes involved in the financing of business organizations from the time of their inception and promotion, during operation and expansion, and during the period of reorganization.

Credit: 2 semester-hours

BUSINESS EDUCATION 409. *Money and Banking*

This course provides a short historical survey of money and the evolution of banking, outside and within the United States. The organization of banks, the nature of their transactions, operations, and relations with other banks are considered. The functioning of the Federal Reserve System and the nature of the money markets are also examined.

Credit: 2 semester-hours

BUSINESS EDUCATION 410A AND 410B. *Cost Accounting*

The course deals with the basic principles of modern cost findings and cost keeping, and endeavors to give a practical application of these principles to present-day conditions.

Credit: 2 semester-hours each

BUSINESS EDUCATION 411. *Retail Store Management*

The work of the store manager in retail store operation is fully explored in this course. The problems of organization and management as they are encountered in various types of retail stores are discussed.

Credit: 2 semester-hours

BUSINESS EDUCATION 412. *Transportation and Communication*

The student in this course becomes acquainted with the various kinds of services rendered by transportation and communication agencies. He also receives some insight as to how to use these services most efficiently; the practices of the agencies; how and why they are controlled by the government.

Credit: 2 semester-hours

BUSINESS EDUCATION 413. *Business Statistics*

This course supplements courses in accounting and social business studies and includes a study of the fundamentals of statistics as they apply particularly to business data gathered from financial statements, sales records and personnel records. Laboratory techniques are used in developing the methods of presentation.

Credit: 2 semester-hours

BUSINESS EDUCATION 414. *Merchandising I*

This course analyzes the problems of how, what, where, and when to buy; the terms of purchasing; tested receiving and marketing procedures; the mathematics of merchandising—setting the retail price, planning mark-up and mark-down, and inventory controls. It is designed to assist the teacher of the prospective or actual small businessman.

Credit: 2 semester-hours

BUSINESS EDUCATION 415. *Public Finance*

This course aims to furnish a practical background for the student with respect to the nature and scope of governmental finance. Some of the areas studied are: the bases of taxation, income and expenses of government, and fiscal administration, including governmental budgets.

Credit: 2 semester-hours

BUSINESS EDUCATION 420. *Field Studies in Business Education*

This orientation course aims to introduce business education students, through direct observational techniques, to the realities of the business world. Six field trips are made in the New York Metropolitan Area which include visits to business organizations where the following types of business activity or relationships may be observed: production, merchandising and advertising, finance, transportation and communication, employer-employee relationships, government and business relationships. The field trips are supplemented by regular class sessions where discussions are held and visual aids presented to make the visits more meaningful.

Credit: 2 semester-hours

DEPARTMENT OF ENGLISH

Graduate study in the Department of English is designed:

1. To increase the student's comprehension and appreciation of the literature of Great Britain and of the United States of America.
2. To introduce current materials and methods for improving instruction in English in the secondary school.
3. To show how language functions in individual expression and in social communication in the language arts; reading, writing, speaking, and listening.
4. To investigate recent experimentation and research in the teaching of English.

Graduate study leading to the Master's degree in English presupposes an undergraduate major in English of at least thirty semester-hours. Before matriculation, each candidate for the Master's degree secures from the Head of the Department an approved course outline requiring at least eighteen semester-hours in English at the senior-graduate level. Distribution of these courses is indicated upon the student's course outline.

All candidates for the Master's degree in English must pass a written comprehensive examination before the degree is awarded. Information concerning the examination may be secured from the Head of the Department.

The candidate may elect to write a thesis of professional value in the teaching of English in the secondary school. Four semester-hours of credit are granted for this thesis, but this credit cannot be considered part of the minimum eighteen semester-hours unless written permission is secured in advance from the Head of the Department.

GRADUATE COURSES

ENGLISH 502. *Victorian Poetry*

The most important English poets who wrote during the transition from the Victorian to the modern period are read and discussed. An important feature of the course is the analysis and appreciative reading of the lyric poetry of Rossetti, Swinburne, Hardy, Bridges, G. M. Hopkins, Francis Thompson, A. E. Housman, Kipling, and W. B. Yeats.

Credit: 2 semester-hours

ENGLISH 503. *Geoffrey Chaucer and His Times*

Some of the works of Chaucer are read rapidly, others studied intensively, so that the students may acquire a broad general understanding of Chaucer's place in the history of English literature as well as facility in reading and interpreting the medieval text of his stories.

Credit: 2 semester-hours

ENGLISH 505. *Philosophy and English Poets*

This course is designed to show the dependence of such English poets as Wordsworth, Coleridge, Shelley, Keats, Tennyson, and Browning upon the philosophical thinking of their day. The course aims to provide a philosophical background for the reading of teachers of modern literature and for the interpretation of much of the poetry which they teach in high school.

Credit: 2 semester-hours

ENGLISH 506. *John Milton*

This course has for its primary aim the understanding and evaluation of Milton's poetry. Contributory to this end are the following topics: the Puritan struggle for civil and religious liberty; the growth of science in the seventeenth century; the life, personality, and prose writings of Milton; his literary heritage and influence; comparison of Milton with the Cavalier Metaphysical poets.

Credit: 2 semester-hours

ENGLISH 507. *Critical Writing*

This course evolves a body of critical principles for judging art and literature, and provides training in the writing of criticism, ranging from comments upon pupils' themes to a full and comprehensive essay upon the work of some outstanding author.

Credit: 2 semester-hours

ENGLISH 511. *The History of Literary Criticism*

The purpose of this course is to familiarize the student with the chief doctrines of the great critics from Aristotle to Arnold and to correlate these critical doctrines with the outstanding writings of each age. By such a study it is possible for the student to evaluate the historical interrelations of expert criticism and literary production. A basic text is used, but much of the information is gleaned from source materials.

Credit: 2 semester-hours

ENGLISH 512. *The Growth and Structure of the English Language*

This course is designed to help the high school teacher understand the structure of modern English, one of the most complicated of contemporary tongues. Through an analysis of the historical evolution of our language, the student discovers the reasons for many of the seemingly illogical and arbitrary characteristics of modern English spelling, grammar, and morphology.

Credit: 2 semester-hours

ENGLISH 513. *The Renaissance*

This course deals with Petrarch and the humanists; Boccaccio and the *Novelle*; the House of the Medici, Savonarola, the Popes; Machiavelli and *The Prince*; Cellini and the *Autobiography*; Castiglione and *The Courtier*; Boiardo, Pulci, Ariosto, and the romantic epic; the drama; the art of Da Vinci, Botticelli, Michelangelo, Raphael, Titian, and others; Rabelais and the *Gargantua and Pantagruel*; Cervantes and *Don Quixote*; Ronsard and the French *Pleiade*.

Credit: 2 semester-hours

ENGLISH 514. *Origin and Development of the Arthurian Legend*

This course deals with the vague and tentative beginnings of the Arthur story in early chronicle and legend; with Geoffrey of Monmouth's pseudo-historical and Chretien de Troyes's romantic treatments; with the great medieval recapitulations of Gottfried von Strassburg, Wolfram von Eschenbach, and Sir Thomas Malory; with the Victorian retellings of Tennyson, Arnold, and Morris; with the musical adaptations of Wagner; and with the modern versions of E. A. Robinson. It includes a detailed history of the development of the legend in its divers forms.

Credit: 2 semester-hours

ENGLISH 515. *Robert Browning*

Browning's characteristic shorter poems are recalled or studied in order to define his fundamental ideas as a writer. This is followed by a study of his longer poems and dramas: the "soul-studies", *Pauline*, *Paracelsus* and *Sordello*; the dramas, *Strafford*, *Pippa Passes*, *A Blot in the 'Scutcheon*, *Colombe's Birthday*, and *In a Balcony*; the translations, *The Agamemnon of Aeschylus*, and *Balaustion's Adventure*; and Browning's masterpiece, *The Ring and the Book*. These works are studied for their literary and philosophical values, as showing the development of Browning as man, poet, and philosopher, and as a reflection of certain phases of nineteenth-century life and thought.

Credit: 2 semester-hours

ENGLISH 516. *Language Problems in the English Curriculum*

This course reviews the several theories of language and studies the problem of meaning in order to arrive at a suitable technique for the interpretation of prose and verse. This technique is then applied to the problems of reading, of composition, of speech, and of appreciation of literature. The course has two aims: to increase the student's own skill in dealing with language, and to increase his effectiveness in teaching.

Credit: 2 semester-hours

ENGLISH 517. *Recent Research and Experiment in the Teaching of English*

This course analyzes and evaluates current research in the fields of language, literature, and composition relevant to the teaching of English in the high school, and examines critically recent experimentation in methods of teaching English. The aim of the course is to make available to the student any recent knowledge and experience which may throw light on the problems of English teaching in secondary schools and to evaluate tendencies in this field. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 518. *The Major Romantic Poets*

This course studies the work of Coleridge, Wordsworth, Scott, Byron, Shelley, and Keats. It devotes especial attention to the poems which are best adapted for the reading of high school students.

Credit: 2 semester-hours

ENGLISH 519. *English in the Modern High School*

This is a seminar in which the methods and materials requisite to the development of a program in the language arts (listening, speaking, reading, and writing) are considered.

Credit: 2 semester-hours

ENGLISH 520. *Great Books on Education*

Students examine the classics dealing with educational theory and practice which they so often read about but rarely consult: Plato's *Republic*, Xenophon's *Cyropaedia*, Cicero's *De Oratore*, Castiglione's *Courtier*, Machiavelli's *Prince*, Rabelais's *Abbey of Theleme*, Ascham's *Schoolmaster*, Bacon's *Novum Organum*, Defoe's *Projects*, Milton's *To Samuel Hartlib on Education*, Rousseau's *Emile*, Byron's *Don Juan*, Hughes' *Tom Brown's Schooldays*, Newman's *Idea of a University*, the Arnold-Huxley debates, and the works of John

Dewey and Jacques Barzun. This course is recommended for graduate students in the Department of Integration.

Credit: 2 semester-hours

ENGLISH 521. *English Literature of Social Problems*

This course surveys English literature as English 460 deals with American literature. The period from 1800 to 1914 is covered, and the principal authors discussed include Shelley, Dickens, Kingsley, Tennyson, Carlyle, Butler, Meredith, Galsworthy, Bennett, Shaw, and Wells. English 460 is not prerequisite to this course.

Credit: 2 semester-hours

ENGLISH 522. *Advanced Phonetics*

This course provides ear-training to develop skill in recognizing and distinguishing a-typical English speech sounds, regional differences in pronouncing American English, and foreign sounds heard in English speech. This is followed by extensive practice in transcribing speech sounds into International Phonetic Alphabet symbols and in reading International Phonetic Alphabet transcriptions. A thorough study of the speech characteristics of some geographical region with which the student is personally familiar is required of each student.

Credit: 2 semester-hours

ENGLISH 524. *Five Great Books*

The aim of this course is to broaden and to deepen the student's general cultural perspective by a study of five books which have profoundly influenced present civilization. The actual choice of texts is a cooperative class enterprise. Selections are made from such books as: *The Bible*, Homer's *Odyssey*, Plato's *Republic*, Shakespeare's *Hamlet*, Rousseau's *Confessions*, Goethe's *Faust*, Tolstoy's *War and Peace*, Dewey's *The School and Society*. This course is designed to provide leadership in local "Great Books" meetings.

Credit: 2 semester-hours

ENGLISH 525. *The Development of the American Novel*

The American novel as a contemporary art form is examined in this course. Beginning with the novels of the early nineteenth century the course traces the rise and development of the Romantic and the Realistic novel and concludes with an example of American Naturalism. The reading of eight novels is required for this course.

Credit: 2 semester-hours

ENGLISH 528. *Perspectives in World Literature*

The point of view of our own democratic culture is surveyed and established in an attempt to see how the literature of Western Europe, the Middle East, and the Orient have influenced and are influencing modern thinking. Such perspectives are designed to provide adequacy in teaching a world point of view through literature.

Credit: 2 semester-hours

ENGLISH 530. *Dante and His Influence in England and America*

Fully two-thirds of the time of this course is devoted to rereading and reassessment of Dante himself in English translation. When Dante's meaning has been revealed, his continued influence from Chaucer through Sackville, Spenser, and Milton to Rossetti, Longfellow, and T. S. Eliot becomes the subject of investigation.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

ENGLISH 401. *The Teaching of English in Secondary Schools*

Students are taught to develop and use materials of the classroom: lesson plans and units of work are prepared and presented for criticism, textbooks are analyzed for training in their use, and bulletin board exhibits and visual education materials are prepared by students for the class. Observation and criticism of teaching in the College High School, and criticism of student compositions are required.

Credit: 3 semester-hours

ENGLISH 402. *Survey of British Literature to 1798*

This course draws together into a systematic narrative the story of the development of English literature from the beginnings to the romantic triumph of 1798.

Credit: 4 semester-hours

ENGLISH 404. *Survey of British Literature*

This course is a continuation of English 402. It takes up the story with the romantic triumph in 1798 and continues it to the present time.

Credit: 2 semester-hours

ENGLISH 405. *The Victorian Poets*

This course covers the work of the Brownings, Tennyson, Arnold, Clough, Morris, the Rossettis, and Swinburne. The authors are presented in relation to the moral, religious, social, and political life of nineteenth-century England.

Credit: 2 semester-hours

ENGLISH 406. *The Modern Novel*

Particular emphasis is given to British and American novels since 1870, and the important tendencies of present-day prose fiction are explored.

Credit: 2 semester-hours

ENGLISH 407. *British and American Biography*

Both the old and new types of biography are read and studied in this course, with emphasis upon the nineteenth and twentieth centuries.

Credit: 2 semester-hours

ENGLISH 408. *Creative Writing*

Students in this course attempt seriously the standard literary forms in prose and verse.

Credit: 2 semester-hours

ENGLISH 409. *The Teaching and Appreciation of Poetry*

This course is both personal and professional. It develops the student's appreciation of poetry as an expression of life and as a form of art, and it considers in detail the aims and methods of teaching poetry.

Credit: 2 semester-hours

ENGLISH 410. *Speech Pathology*

This course deals with diagnostic and corrective procedures, causes and treatment for stuttering, cleft palate, spastic speech, and aphasia. This course is required to teach speech and speech defectives.

Prerequisites: English 208 and 324

Credit: 2 semester-hours

ENGLISH 413. *Modern Poetry*

This course deals with the work of contemporary poets, both British and American.

Credit: 2 semester-hours

ENGLISH 414. *Public Relations and School Publicity*

This course considers such problems as the development of a student publicity staff, preparation of copy for professional newspapers, publicity for school news, and the development of better school-community relations. A study is made of other publicity media, including radio, visual aids, the platform, displays and exhibits, special events, sports promotion and fund-raising. A background of elementary journalism is helpful in this course.

Credit: 2 semester-hours

ENGLISH 415. *Journalism for Advisers*

This course is designed to qualify students to act as advisers of school publications. Problems of staff organization, as well as editorial, business, advertising, and circulation problems are discussed. The course assumes a knowledge of elementary journalism or the ability to combine extra assignments in elementary journalism with this course.

Credit: 2 semester-hours

ENGLISH 417. *Methods in the Teaching of Speech*

In this course a study is made of the objectives of speech education, modern trends in instruction, speech textbooks and teaching materials, and the integration of speech with other academic departments of study. This course is required to teach speech.

Credit: 3 semester-hours

ENGLISH 419. *Grammar for Teachers*

This course is a study of the basic facts of grammatical relationships in English, and of the current problems of "rules" as opposed to "usage." The primary aim of the course is to acquaint students with the true function of grammar in speech and writing.

Credit: 2 semester-hours

ENGLISH 420. *High School Classics*

This course is a seminar for prospective student teachers on the problem of teaching literature in high schools. The student reads numerous articles on the "classics" vs. the "moderns" controversy, becomes thoroughly acquainted with the contents and aims of the best high school anthologies currently in use, and builds up a working philosophy for his own teaching. Through the continued practice of reporting and discussion leading, the student is enabled to integrate his total experience in college.

Credit: 2 semester-hours

ENGLISH 421. *The Short Story*

This course traces the history of the short story as an evolving literary form, emphasizing the productions of the nineteenth and twentieth centuries.

Credit: 2 semester-hours

ENGLISH 422. *Seventeenth Century Literature*

This course covers the period from Donne through Dryden. It deals with Jacobean and Restoration drama; the Jonsonian, Metaphysical and Restoration lyric; the prose of Browne, Walton, Donne, Taylor, Hobbes, Burton, and Bunyan; the prose and verse of Milton; the prose and verse of Dryden.

Credit: 2 semester-hours

ENGLISH 426. *The Victorian Novel*

This is an intensive unit of work on the novel in Victorian England. Novels studied in the high school are treated professionally in class.

Credit: 2 semester-hours

ENGLISH 427. *Theatre and Society*

Dramatic expression from the time of the ancient Greeks to the present is studied carefully to analyze social, political, and ethical trends as they are reflected in the drama.

Credit: 2 semester-hours

ENGLISH 428. *The Film and Society*

This course considers the impact of the motion picture on our culture. The film is studied and evaluated as a powerful social and educative force, as an art form, and as an entertainment medium. The origin and development of film techniques are treated, and films are shown at each session, accompanied by analysis and discussion. The scenario as a literary type and the adaptation of prose fiction for film purposes are included in the course content. A laboratory fee of \$5.00 to cover the cost of film rentals accompanies this course.

ENGLISH 430. *Reading in Secondary Schools*

After examination of recent research concerning reading activities at various age levels, the class examines and evaluates methods devised to develop reading skills, to increase vocabularies, and to improve the comprehension of secondary school students.

Credit: 2 semester-hours

ENGLISH 431. *Shakespeare*

This course deals with Shakespeare's plays in relation to his life, his times, his contemporaries, and Elizabethan drama generally. Extensive reading is required from Shakespeare, his predecessors, contemporaries, and successors. The problems of stage production in both Elizabethan and modern theatres and of Shakespearean criticism are analyzed.

Credit: 4 semester-hours

ENGLISH 432. *The Development of the Drama*

The development of the drama is studied in all periods from ancient Greece and Rome through the Middle Ages and the Renaissance to the beginning of modern drama with Ibsen. The emphasis of the course is placed on trends, developments, and the major characteristics of the drama and its necessary complement, the theatre. Representative plays are read and discussed.

Credit: 2 semester-hours

ENGLISH 435. *Stagecraft*

This workshop course provides training in construction and painting of scenery and lighting the stage. A minimum of twelve clock hours of craft work upon a production of the College or College High School is required for credit in this course.

Credit: 2 semester-hours

ENGLISH 438. *Masters of American Literature*

Significant American writers, including Irving, Hawthorne, Poe, Emerson, Melville, Whitman, and Mark Twain, are studied to discover their contributions to American life and to reveal important forces in our national background.

Credit: 2 semester-hours

ENGLISH 439. *Contemporary American Literature*

This course studies the major authors and literary movements in America during the contemporary period. Beginning where the course in *Masters of American Literature* normally ends, it is designed to complete a unit in this subject.

Credit: 2 semester-hours

ENGLISH 440. *The English Novel from Defoe to Scott*

After a brief preliminary examination of the medieval, the Elizabethan, and the seventeenth century anticipations of the novel, the development of English fiction from Defoe to Scott is studied.

Credit: 2 semester-hours

ENGLISH 441. *Medieval Epic, Saga, and Romance*

This course deals with the chief medieval epics, sagas, and romances from the literatures of England, France, Germany, Ireland, Iceland, Wales, and Italy in modern English translation.

Credit: 2 semester-hours

ENGLISH 442. *American Literature*

This chronological survey examines American literature to observe its reflection of the political, social, and ethical principles of the American people.

Credit: 4 semester-hours

ENGLISH 443. *Modern Drama*

An historical survey of trends, dramatists, plays, and accomplishments from Ibsen to the latest prize plays on Broadway provides background for this course.

Credit: 2 semester-hours

ENGLISH 444. *Preparing the Radio Script*

This course trains the student in planning and writing educational radio scripts. Selected class scripts are recorded in the College studio and are offered to commercial stations for broadcasting.

Credit: 2 semester-hours

ENGLISH 445. *Eighteenth Century Literature*

Major essayists, poets, dramatists, novelists, and letter writers are read and evaluated in terms of the thought, life, and literary movements of their own time and of their significance for the present generation.

Credit: 2 semester-hours

ENGLISH 446. *The One-Act Play*

This course studies the one-act play as an art form, devoting special attention to plays which are suitable for high school production.

Credit: 2 semester-hours

ENGLISH 447. *Philosophy of Great Literature*

By studying one or two masterpieces in a given semester this course aims to help the student develop a plan of study to achieve a systematic understanding of the philosophic world-views and life-views implicit in such works as: Aeschylus's trilogy, *The Oresteia*; Plato's

Timæus; Boethius's *Consolations of Philosophy*; Dante's *Divine Comedy*; Shakespeare's *Hamlet*; Milton's *Paradise Lost*; Pascal's *Pensées*; Goethe's *Faust*; Blake's *The Marriage of Heaven and Hell*; Dostoevski's *Brothers Karamazov*; Mann's *The Magic Mountain*; Hesse's *Demian*; Henry Adams's *Mont St. Michel and Chartres*; the *Bhagavad-Gita*; Lao-tse's *The Book of Tao*; and Auden's *Collected Poetry*.

Credit: 2 semester-hours

ENGLISH 448. *Choral Speaking*

As members of a speaking choir, students acquire skill in interpreting various forms of literature suitable for group treatment.

Credit: 2 semester-hours

ENGLISH 449. *Public Speaking*

This is an advanced course in the theory and practice of public speaking. It provides opportunity for training in the more complex speech skills, especially in the techniques of leadership in speech situations and the techniques for making speech responses in co-operative situations.

Prerequisite: ENGLISH 204 or the equivalent

Credit: 2 semester-hours

ENGLISH 450. *Contribution of American Drama to American Democracy*

This course studies the part played by American drama in the evolution of American democracy from the eighteenth century up to the contemporary period.

Credit: 2 semester-hours

ENGLISH 451. *Literature and Art in Western Culture*

This course deals with the nature of literature and considers its importance as a factor in the development of international understanding. It deals with the relation between the use of language in literature and with the methods of art, since the re-creation of experience is a function common to both. Through reading the literature which is being read by our neighbors today, both in Europe and in the Western Hemisphere, students are able to participate in a common experience with them.

Credit: 2 semester-hours

ENGLISH 454. *Training the Speaking Voice*

This is a course in the study of the problems of speech, the development of a pleasing speaking voice with precision in diction, and the application of speech skills to practical speaking situations.

Credit: 2 semester-hours

ENGLISH 455. *Reading Interests of High School Students*

Through wide reading, study and preparation of bibliographies, and establishing criteria for judging current books, the student is prepared to guide the recreational reading of junior and senior high school students. Credit cannot be given for both English 301A and 455.

Credit: 2 semester-hours

ENGLISH 456. *Play Direction*

This course covers the choosing and casting, as well as directing, of plays. Scenes are directed for class criticism, and a detailed prompt-book of one play is prepared. This course complements English 435.

Credit: 2 semester-hours

ENGLISH 457. *Workshop in Speech Activities*

It is the purpose of this course to prepare students to organize and to conduct assembly programs, PTA demonstrations, and similar activities. Class lectures and discussions cover all phases of the director's responsibilities. Groups conduct research on suitable program materials and share their findings with classmates. Each student prepares a list of programs of various types which he could present during a school year.

Credit: 2 semester-hours

ENGLISH 458. *Radio Directing*

This course offers training in the organization and direction of radio programs, and equips the student to select material for broadcasting and to cast and to rehearse programs. Listening is directed toward an analysis of common radio presentation techniques and the appreciation of successful programs.

Credit: 2 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

Some of the contributions which have gone into the making of Chinese literature, such as the work of Tao Teh Ching, the *Analects of Confucius*, *The Monkey*, and the poetry of Tang are considered. Aside from a general insight into the great literature of China special attention is given to English translations of masterpieces of Chinese literature. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon. During the workshop period individual students work on specific phases under the guidance of the instructor.

Prerequisite: SOCIAL STUDIES 499—China Workshop

Credit: 3 semester-hours

ENGLISH 460. *American Literature of Social Problems*

This course surveys the American literature which presents social problems during the period from 1800 to 1914 in an attempt to discover the attitudes of the various authors toward these problems. The works of such authors as Cooper, Lowell, Thoreau, Whitman, Howells, Bellamy, Garland, and Glasgow are studied from this point of view. Enough of the social background of the period is discussed to give the necessary perspective for the discussion of the literature, but the emphasis is placed on the reflection of the problems in literature and not merely on the problems themselves.

Credit: 2 semester-hours

ENGLISH 461A. *Speech Clinic Practice*

After the techniques of interviewing, of preparing case histories, of diagnosing speech disorders, of planning therapies, and of determining prognoses have been taught through lectures and demonstration lessons, each student is assigned one or more persons with speech defects for supervised practice in correcting speech disorders. Credit is given on a laboratory basis, and the course meets three hours weekly. This course is required for the teaching of speech defectives.

Credit: 2 semester-hours

ENGLISH 461B. *Advanced Speech Clinic Practice*

This course provides for additional supervised speech correction practice with adults or children with speech disorders. Credit is given on a laboratory basis, and the course meets three hours weekly.

Credit: 2 semester-hours

ENGLISH 462. *Group Discussion and Leadership*

Students are taught the principles of democratic discussion and methods for guiding the committee meeting, panel symposium, lec-

ture, and debate forums. Frequent opportunities to apply these principles and methods are given through discussion of topics chosen by the class.

Credit: 2 semester-hours

ENGLISH 463. *Audio-Visual Aids in Teaching Speech*

The aim of this course is to equip prospective teachers to understand the desirable characteristics; capabilities; and all possible uses of charts, models, and magnetic and disc recorders available for the teaching of speech. The distribution, cost, operation, servicing, and storing of instruments and of supplies are also considered.

Credit: 2 semester-hours

ENGLISH 464. *Speech Psychology*

The mental processes involved in acquiring language and in using it in effective oral communication are reviewed. Problems involving psychological principles as they apply to oral teaching, to audience leadership and control, to the alleviation of stage fright, and to the teaching of speech improvement are considered along with the principles of general semantics.

Credit: 2 semester-hours

ENGLISH 465. *Speech Arts Activity*

Each speech major is required to earn at least one semester-hour of credit in some supervised speech arts activity, such as: playing a major role in a major production; directing a three-act play or its equivalent; giving a public play reading or lecture recital; directing a series of assembly programs; or directing and producing a series of radio programs.

Credit: 1 semester-hour

ENGLISH 466. *Speech Development; Improvement and Reeducation*

This course is intended for superintendents, principals, and classroom teachers who have little or no background in speech education. Consideration is given to the following topics: (1) speech development; (2) speech difficulties or problems found on the kindergarten, elementary, and secondary school levels; (3) acquisition of good voice and speech characteristics; (4) use of techniques and materials in classrooms to motivate good speech patterns; and (5) ways of setting up and integrating speech education in school systems. Demonstrations with individuals and groups are made, and students are expected to prepare a practical project.

Credit: 2 semester-hours

DEPARTMENT OF FOREIGN LANGUAGES

In its undergraduate work the Foreign Language Department endeavors to train students in sound scholarship and true culture and to give them a sympathetic understanding of the nation and people whose language they are preparing to teach. There has been a growing demand from the graduates of Montclair and other colleges that graduate work be given by the department. Such work is now offered in French and Spanish. Effort is made to schedule the classes in the late afternoons, Saturday mornings, and in summer terms for the accommodation of teachers in service.

Many students prefer to do part of their graduate work in a country where the language of their major is spoken. For such students the department has instituted a course, *STUDY ABROAD*, by means of which the student may gain as many as sixteen semester-hours of credit. Students desirous of doing this work should consult with the Head of the Department who will outline the requirements and procedures necessary that the work may receive credit at Montclair.

All students take a comprehensive examination. Those who wish to write a thesis as partial fulfillment of the requirements for the Master's degree must secure the consent of the Head of the Department.

FRENCH 502. *Study Abroad*

FRENCH 510-515. *French Provincial Civilization*

The cultural aim of the course is reached through the study and discussion of the outstanding French contemporary regionalist authors. The professional aim is attained by means of the study of regional geographic, historic and artistic sources, customs, legends, costumes, and folk songs. The six parts of this course form a complete study of regional France.

Credit: 2 semester-hours each

FRENCH 516 and 517. *Survey of French Literature*

This course draws together in a systematic way the development of French literature from the beginning to modern times. It brings out the chief characteristics of the various epochs and the evolution of French thought and literary ideals from the *Chanson de Roland* to the present.

Opportunity is provided for students to review the subject-matter of the former period courses and to see these periods in their proper perspective in the history of French literature. The course is conducted in French.

Credit: 2 semester-hours each

SPANISH 502. *Study Abroad*

Senior-Graduate Courses on 400 level as listed in the undergraduate catalog.

DEPARTMENT OF INTEGRATION

Graduate courses in this department meet one or more of three needs: (1) instruction in Administration and Supervision, leading to the A. M. degree and New Jersey certification for one or more of the positions of Subject Supervisor, General Supervisor, Elementary School Principal, Secondary School Principal, Supervising Principal, and Superintendent; (2) instruction in Personnel and Guidance, leading to the A. M. degree and New Jersey certification in guidance; and (3) instruction in advanced professional courses for the classroom teacher.

In pursuit of the above objectives most graduate courses in the Department of Integration are designed for students who are having or have had teaching experience. Other courses presuppose at least a teaching certificate. Enrollment in graduate Integration courses, therefore, is subject to the following restrictions:

1. *Students Who Do Not Have a Teaching Certificate*—Graduate students in this classification may enroll in undergraduate and senior-graduate (400 level) courses in order to meet certification requirements. They also may enroll in the following graduate Integration courses: 500A, 500B, 500C, 505, 540, 550, 551, and 552. (These courses are designated in the descriptions below by a single asterisk *.) Not more than eight semester-hours earned in senior-graduate and the graduate courses listed above may be counted toward an A. M. degree in the Integration Department.
2. *Graduate Students Who Possess a Teaching Certificate But Who Have No Teaching Experience*—Students in this classification may enroll for any of the courses listed in the previous paragraph and also Int. 500D, 500E, 500F, and 503. (These additional courses are designated below by a double asterisk **.) They may count no more than eight semester-hours in any courses earned prior to matriculation for the A. M. degree.
3. *Students Matriculated for the A. M. Degree*—Graduate students working toward an A. M. degree in either the field of Administration and Supervision or Personnel and Guidance are permitted to matriculate only when they are having or have had teaching experience. Students majoring in Personnel and Guidance are required to have two years of teaching experience before the degree can be conferred.

4. Students who plan to remain classroom teachers are not encouraged to seek an A. M. degree in either the field of Administration and Supervision or Personnel and Guidance.
5. Courses in the teaching of elementary school subjects are offered primarily to help graduate students to complete certification in this field. Such courses may be counted toward an A. M. degree only under certain conditions which are outlined by the Integration Department graduate adviser.

GRADUATE COURSES

*INTEGRATION 500A. *Basic Educational Trends*

This course deals with the historical background which administrators and supervisors, as well as teachers, need in order to evaluate problems and policies in due perspective. It emphasizes the current trends in American society and their bearing upon education. It also considers philosophies concerning the causes of rises and declines in outstanding civilizations and the part education could play among them.

Credit: 2 semester-hours

*INTEGRATION 500B. *Advanced Educational Psychology*

The course covers the various aspects of growth. Individual differences, their measurement, and their bearing on educational practices and principles furnish topics of study and discussion. Principles and laws of learning are reviewed. Some time is given to problems of personality as encountered in school work. The several points of view which have been prominent in the psychology of the past fifty to seventy-five years are examined for their contributions to thinking about human nature.

Prerequisite: An introductory course in psychology.

Credit: 2 semester-hours

*INTEGRATION 500C. *Recent Trends in Secondary School Methods*

This course emphasizes the fundamental principles underlying the technique of teaching on the secondary school level. Some of the topics considered are: organization of knowledge, the logical and psychological aspects of method, developing appreciations, social-moral education, teaching motor control, fixing motor responses, books and verbalism, meeting individual differences, guidance in study, tests and examinations, marks and marking.

Credit: 2 semester-hours

****INTEGRATION 500D.** *School Administration I: Functions and Organization*

This introductory course in educational administration is concerned with general functions and personnel, as well as with the general organization, of public education on local, State, and national levels. It deals also with Federal-State relations, the State and sectarian education, the expanding scope of modern school systems, types and bases of school organization, and professional ethics.

Credit: 2 semester-hours

****INTEGRATION 500E.** *School Administration II: Law and Finance*

This course acquaints the student with the allied fields of school law and school finance, with special reference to New Jersey. Its topics include basic principles of public school support, taxation, Federal aid, educational finance, legal provisions for school district borrowing, tenure provisions, and rights and duties of school boards and officials.

Credit: 2 semester-hours

****INTEGRATION 500F.** *School Administration III: Community Relations*

This course concerns the relation of the school to other educational efforts of the community. It considers the scope and types of agencies and informal influences of an educational nature, and also the agencies and methods by which the best total co-operative effort can be attained. It deals also with methods and plans of publicity. Constant reference throughout is made to New Jersey localities.

Credit: 2 semester-hours

INTEGRATION 502. *Organization and Administration of the Modern High School*

The following topics are considered: the student personnel, building and revising the high school curriculum, providing for individual differences, making the school schedule, records, the guidance program, pupil participation in government, the extra-curricular program, the health program, the safety program, discipline, library and study hall, cafeteria, the principal's office, and evaluating results.

Credit: 2 semester-hours

****INTEGRATION 503.** *Methods and Instruments of Research*

This course is required of all candidates for the Master's degree without regard to their field of major interest. Its purpose is to intro-

duce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student sets up a problem and plans and carries out its solution.

Prerequisite: MATHEMATICS 400

Credit: 2 semester-hours

INTEGRATION 504A. *Curriculum Construction in the Secondary School*

The purpose of this course is to introduce the student to constructive criticism of American culture, to consider the extent to which the secondary school curriculum meets the needs of a changing civilization, and to consider effective means of curriculum construction.

Credit: 2 semester-hours

INTEGRATION 504B. *Seminar in Curriculum Organization*

This course is for students actively engaged in problems of curriculum reconstruction and those who are anticipating committee work in this field. This work is conducted under seminar or individual guidance and the hours for the conferences will, therefore, be arranged personally between the student and the instructor. (INTEGRATION 504A or INTEGRATION 548 is prerequisite to this course.)

Credit: 2 semester-hours

*INTEGRATION 505. *Organization and Administration of Extra-Curricular Activities*

The first part of this course considers such general problems of extra-curricular activities as: their growing importance; their relation to the curriculum; the principles underlying their organization, administration, and supervision; and methods of financing. In the second part, an intensive study is made of the home room, the assembly, the student council, clubs, athletics, school publications, and other activities in which the class is especially interested.

Credit: 2 semester-hours

INTEGRATION 508. *Supervision of Instruction in Secondary Schools*

This course emphasizes the more practical phases of supervision which are met most frequently by those engaged in it. Among the topics are: the set-up for adequate supervision, supervision as encouraging and guiding the growth of teachers and the improvement

of educational procedures, the supervisory functions of teachers' meetings, discussion groups, general and professional reading, the writing of articles, co-operative curriculum modification, utilization of community resources, and teacher intervisitation.

Credit: 2 semester-hours

INTEGRATION 510. *Seminar in Secondary Administration and Supervision*

In this course the class makes an intensive study of administrative and supervisory problems suggested by the educational events and trends of the year, by the interests and responsibilities of the members of the class, and by educational movements in New Jersey and the country. Each student does an individual piece of research which he reports to the class. This represents advanced work which depends upon previous study or experience in educational administration or supervision. (Prerequisites: INTEGRATION 502 or 601A, and 508 or 601B.)

Credit: 2 semester-hours

INTEGRATION 517. *Administration of the Elementary School*

This course analyzes and evaluates the administrative duties and relationships of the elementary school principal. Particular consideration is given to: building management, effective use of the school plant, sanitation, health service, the library, personnel management, the administration of the curriculum, community relationships, and publicity.

Credit: 2 semester-hours

INTEGRATION 518. *Supervision of Instruction in the Elementary School*

This course has been planned for those engaged in the supervision of the elementary school, and for those who are preparing for such responsibilities. Principles of classroom supervision are developed and applied to learning situations. Among the more important topics that receive attention are: the nature and function of supervision, the organization necessary for effective supervision, the nature and significance of the teacher's purposes, the methods and techniques of group and individual supervision, the technique of observation, and the supervisory conference.

Credit: 2 semester-hours

INTEGRATION 520. *Principles of Mental Hygiene*

This course is designed to be a general survey of the principles and practices of mental health with special reference to the mental health of teacher and pupil. It involves a thorough grounding in fundamental principles of mental hygiene with much practical consideration of the mental-health values of instructional programs and procedures. Discussion centers in practical efforts to develop wholesome personalities in our schools.

Credit: 2 semester-hours

INTEGRATION 521A. *Educational and Psychological Measurement*

This course deals with fundamentals of educational and psychological measurement: test theory, statistical concepts, test construction, evaluation, and interpretation. The place of tests in the instructional program is stressed.

Credit: 2 semester-hours

INTEGRATION 521B. *Psychological Tests in Guidance Programs*

This course is designed to familiarize the student with various psychological tests and scales that may be used in guidance programs in the secondary school. The student is given practice in administering many types of group tests. This includes scoring the tests and evaluating the results, with a discussion of ways in which these results may be used. Much time is spent in actual laboratory demonstrations of tests, giving students an opportunity to serve as subjects and as examiners. Class discussion is based upon first-hand information gained through use of the tests, on readings, and on class reports.

Prerequisite: INTEGRATION 521A

Credit: 2 semester-hours

INTEGRATION 523. *The Exceptional Child*

This course deals with the special problems of adjustment of the exceptional child. A study is made of mentally, physically, and emotionally handicapped children and of modern methods for their training. Part of the time is devoted to the special problems presented by children of superior ability. Much illustrative material is taken from actual problem cases encountered in public school work at junior and senior high school levels.

Credit: 2 semester-hours

INTEGRATION 528. *The Visiting Teacher—Psychiatric Social Work*

This course aims to introduce the student to school and community activities of the visiting teacher. The case method approach is stressed throughout. The work consists of study and discussion of the literature on the visiting teacher, and the preventive, remedial, and corrective aspects of this work.

Prerequisite: Foundation courses in psychology

Credit: 2 semester-hours

INTEGRATION 529. *Field Work in Guidance*

The aim of the course is to introduce the student to various aspects of guidance through experience in agencies actually dealing with such problems. Students observe and participate in activities of the agencies to which they are assigned and write full accounts of these observations and experiences. Some time is spent in discussing and evaluating these experiences and relating them to the literature of the subject. Prerequisites are: experience in teaching; familiarity with the literature on all aspects of guidance and mental hygiene; and INTEGRATION 503, 520, and 521B. This work is conducted by seminar and individual guidance. The hours for the conferences are arranged personally by student and instructor.

Credit: 4 semester-hours

INTEGRATION 530A. *Corrective and Remedial Reading in Secondary Schools*

This course offers an investigation and interpretation of the reading problems which are found in secondary school classes. A study is made of the causes of reading difficulties, methods of diagnosis, and techniques of remedial and corrective teaching. Particular attention is given to the selection and adaptation of suitable curriculum materials. Guidance is given to teachers with individual case problems of retarded, normal, and superior pupils. Illustrative material is taken from case studies developed by classroom teachers.

Credit: 2 semester-hours

INTEGRATION 530B. *Workshop in Corrective and Remedial Reading in Secondary Schools*

This course is designed for students who are directing or instituting programs of remedial and corrective reading and for those who are teaching individuals and classes in such programs. For the most part each student works intensively on his own teaching problem, receiving suggestions and recommendations as the work progresses. Some

topics of common interest are: diagnosis, remediation, evaluation, organization and administration of reading programs; use and cost of materials and equipment; relation to the rest of the educational program of the school.

Prerequisite: INTEGRATION 530A or the equivalent, or considerable experience in remedial work

Credit: 2 semester-hours

INTEGRATION 532. *The Supervision and Teaching of Reading in Elementary Schools*

The place of reading in the entire elementary school program is analyzed. Attention is given to necessary remedial work for junior high school students. Materials and their use in instructional programs are studied with a view toward increasing power. All growth levels are considered. Good first teaching is of primary concern; however, the analysis and correction of certain reading difficulties constitute an important portion of the course.

Credit: 2 semester-hours

INTEGRATION 535A. *Vocational Guidance*

This course is especially intended to enable high school teachers to guide their pupils in planning for constructive vocational life. The course is designed to be helpful also to adults who are seeking better vocational adjustment. The following topics are included: the purpose of work, main areas of work, inventory of personal interests and traits, analyzing interests and traits, samples of personal inventories with analyses and interviews, exploring one's area of work, making the most of school days, finding the first job, adjustments on the way, advancement—what it is and how to attain it, intelligent use of money, balanced use of time, and cultivating pride of work.

Credit: 2 semester-hours

INTEGRATION 535B. *Vocational Counseling and Guidance: Principles and Practices*

This course is intended for counselors in the junior and senior high schools to obtain information about the principles and philosophy of vocational education and the techniques of counseling youths who wish to receive pre-employment training, and for counselors of out-of-school groups who are attempting to make readjustments to occupational life. The course reviews the general provisions of the Smith-Hughes and George-Barden Acts and the specific provisions in these acts for programs of occupational information and guidance. Attention also is given to guidance techniques for job preparation and

readjustment, the matching of educational and personal abilities to job specifications, the effects of social legislation on the employment of youths, a review of State and Federal labor legislation, and a study of techniques used in determining occupational needs and occupational changes.

Credit: 2 semester-hours

INTEGRATION 536. *Educational Guidance*

This course is concerned with the facilities available for education after high-school graduation, the problem of further training for pupils leaving school before completing high school, and the academic problems of students while in school. A brief survey of colleges and college-admission procedures is made.

Credit: 2 semester-hours

INTEGRATION 537. *Social-Moral Guidance*

This course is concerned with the non-vocational and non-academic personal and social problems of pupils as well as with the development of techniques by which counselors can integrate the pupil's personal life with the mores and customs of society. It also includes a study of the possible services of various community agencies and a study of the counselor's relation to problems of discipline and citizenship education.

Credit: 2 semester-hours

INTEGRATION 538. *Group Guidance and Counseling Activities*

This course is concerned with the various techniques for helping individual pupils and for using group activities including role-playing as a guidance technique. The group activities considered include those of home rooms, activity periods, occupation courses, student field trips, placement follow-ups, college nights, and career days.

Credit: 2 semester-hours

*INTEGRATION 540. *Recreational and Activity Leadership*

It is the aim of the course to furnish each student with practical skills that are of service in dealing with young people of high school age. The practical side is supplemented by a thorough consideration of source material and theory. A partial list of the areas covered in the course follows: how to organize and handle groups, the use of leaders from within the group, indoor games, outdoor games, special hikes, outdoor cooking, camp-fire leadership. Special field trips are provided to observe camps and playgrounds in operation.

Credit: 2 semester-hours

INTEGRATION 548. *Curriculum Construction in the Elementary School*

This course offers an opportunity to review state and city elementary curricula; to discuss the principles of curriculum construction; to collect new teaching materials for the various subjects; and to evaluate, organize, and grade these materials. Teaching procedures in the use of materials are discussed and evaluated in terms of pupil needs, the objectives set up, and the results obtained. This course offers an opportunity to make a special study of the materials and procedures to be used in the supervision of the language arts.

Credit: 2 semester-hours

INTEGRATION 549. *Principles, Practices, and Philosophy of Vocational Education*

This course is intended to give school administrators and those preparing for the field of administration an understanding of the philosophy of this field of education. The course includes the following subjects: the Smith-Hughes Act, the George-Barden Act, the relationships between State and local boards of education, the State Department of Education, and the United States Office of Education in the administration of these acts; the State plan for vocational education for the period 1947-1952; the basic requirements for courses in the fields of agriculture, trades, and industry; home economics, distributive education, and occupational information and guidance. Consideration is given to full-time, evening, and part-time cooperative and vocational technical programs; also apprenticeship training and work experience for out-of-school youth and adults. The methods of reimbursing local boards of education for approved vocational activities are outlined.

Credit: 2 semester-hours

* INTEGRATION 550. *Child and Adolescent Development*

This course reviews the general characteristics of child and adolescent development: motor and physiological, social, emotional, language, intellectual, and interests and ideals. The influence of home, school, community, and institutional life on child and adolescent development are considered as well as problems of guidance presented by children in the normal course of development and also those presented by deviations from the normal course.

Credit: 2 semester-hours

* INTEGRATION 551. *Principles and Techniques of Guidance*

Topics included in this course cover: philosophy of guidance, history of the guidance movement, the need for guidance presented by children and adolescents. The methods of gathering useful data are studied, and school records, exploratory activities, tests, inventories, the case study approach, occupational information, and occupational data are treated as well as general methods of guidance with special stress on interviewing and counseling of students.

Credit: 2 semester-hours

* INTEGRATION 552. *The Junior College Curriculum*

This course considers admission requirements, required and elective courses, course contents, and supplementary extra-curricular and guidance activities of the junior college. As a background for a consideration of the principles underlying junior college curricula, there is a brief treatment of the beginnings, aims and functions, administrative organizations, and general trends of American junior colleges.

Credit: 2 semester-hours

INTEGRATION 553. *Core-Curriculum and Life-Adjustment Programs in High Schools*

This course concerns two leading educational developments of the last decade after a discussion of their philosophy and historical antecedents. The most significant school programs already adopted to put these developments into practice are presented in detail.

Credit: 2 semester-hours

INTEGRATION 601. *Workshop in Education*

Section A—Organizing and Administering the School

Section B—Supervising Instruction

Section C—Dealing with and Understanding Youth

The workshop course enables the graduate student to devote his time to an educational topic or school problem of current interest to him and to secure the help of the staff, fellow students, and college facilities in pursuing this study. Members of the workshop may meet together to discuss matters of common concern in respect to the current school situation. In addition, the student works independently on his own subject and at times meets with a small group interested in the same area.

In the past, students have worked on topics in such areas as these: problems in administration, guidance programs, extra-curricular activities, school philosophies, problems in supervision, curriculum plan-

ning, and community relations. The success of the workshop depends much upon the student knowing what he wants to accomplish in six weeks, the procedure being flexible enough to support his purposes. He must have his proposed problems for study approved by the Director of the Workshop before he enrolls for the course.

The workshop is offered only in the summer session. It is divided into three sections, as noted above. The student may enroll for four semester hours credit or for two, the four calling for two periods of scheduled time in the course daily, the two calling for one period of scheduled time in the course. The student taking the course for two credits enrolls for one of the three fields: A—administration, B—supervision, or C—guidance. The student taking it for four credits may do all the work in one of these three fields, or he may enroll for two hours credit in one and two in another.

Credit: 2 or 4 semester-hours

INTEGRATION 602. *Seminar in Guidance*

This course is designed to provide a laboratory situation for the exploration and study of the present practices with respect to the three major phases of the guidance program. Usually this seminar is given in conjunction with either Vocational (INTEGRATION 535A), Educational (INTEGRATION 536), or Social-Moral (INTEGRATION 537) Guidance. The major portion of the time is spent on field trips, in private investigation, and in research.

Prerequisites: INTEGRATION 551, and have taken or be taking in conjunction one of the courses of major emphasis listed above

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

Most of the following courses are set up to serve graduate students as well as College seniors. To carry graduate credit, the course in question must be approved by the candidate's adviser. In all instances, INTEGRATION 406, INTEGRATION 409, and INTEGRATION 410 will be accepted as work for either of the two graduate degrees in this department. For a more complete description of these courses see the undergraduate catalog.

INTEGRATION 400A. *Principles and Philosophy of Secondary Education*

This course evaluates educational objectives, techniques, procedures, and organizations in relation to the needs and demands made upon the school by society and by the student.

Credit: 2 semester-hours

INTEGRATION 400B. *Practicum in Secondary Education*

This course follows the student-teaching. It makes use of the teaching problems encountered by the students in the preceding twelve weeks, as well as similar problems reported by students in former years.

Credit: 2 semester-hours

INTEGRATION 406. *Educational Sociology*

This course deals with the application of sociological principles to educational problems. The school is treated as a part of the community, and the various social forces that affect the school and its administration are considered.

Credit: 2 semester-hours

INTEGRATION 408. *Selection and Utilization of Audio-Visual Materials*

Sources, selection, and evaluation of audio-visual aids are studied in this course. Techniques in developing individual reference catalogs of audio-visual aids are stressed.

Credit: 2 semester-hours

INTEGRATION 409. *Radio and Sound Equipment in the Classroom*

This course trains teachers and school executives in the use of radio programs, amplifying systems, recording equipment, and record players. Actual practice is given in the use of these educational aids. Problems of script-writing, microphone and recording techniques, and program directing are considered.

Credit: 2 semester-hours

INTEGRATION 410. *Teaching Materials Workshop*

This course is for those persons who wish to study advanced problems in the utilization and administration of audio-visual materials. Individual research is stressed, and there is an opportunity to work out individual projects.

Credit: 2 semester-hours

INTEGRATION 430. *Techniques for Improving Reading Abilities*

This course deals with the diagnosis and remedial treatment of difficulties in reading. A study is made of the basic principles underlying desirable reading experiences and their application in guiding children to success in learning to read adequately.

Credit: 2 semester-hours

INTEGRATION 440. *Camping Education*

The purposes of this course is to familiarize the students with camping and outdoor education as educational methods utilized by the schools of America. The aims and methods of camping are studied, and consideration is given to the communities that have active camping and outdoor education programs in operation.

Credit: 2 semester-hours

INTEGRATION 441. *Conservation Education*

The social, economic, and scientific implications of conservation are considered in this course. Discussion periods are interspersed with field trips to forest areas and demonstrations of conservation problems.

Credit: 2 semester-hours

INTEGRATION 442. *Practicum in Camp Leadership*

In this course the student has an opportunity to learn the techniques of camp leadership through practical experience, guided group study, and discussion. The practical experience comes through serving as a camp counselor in an actual camp situation.

Credit: 2 semester-hours

INTEGRATION E460. *Public School Program of Studies*

This title is given to a group of courses designed to meet requests from public school systems desiring help in curriculum reconstruction. Each of the parts of this general course will be given on a cooperative inter-college basis, and taught by specialists in the various fields selected from the faculties of the cooperating State Teachers Colleges. Certificates of credit will be issued by the college sponsoring the work.

- Part I. 460A—Principles of Curriculum Revision
- Part II. 460B—Workshop in Curriculum Revision
- Part III. 460C—Organization and Evaluation of Curricula
- Part IV. 460D—The Social Studies Program of Studies
- Part V. 460E—The Language Arts Program of Studies
- Part VI. 460F—The Science Program of Studies
- Part VII. 460G—Workshop in Materials and Methods of
Science Education
- Part VIII. 460H—The Mathematics Program of Studies

These cooperative inter-college courses are provided only when the requests from the public school authorities of the county, municipality, or community are such as to require their use. No undergraduate may elect this course unless he is actively engaged in teaching.

Credit for each part: 2 semester-hours

ELEMENTARY EDUCATION COURSES

Although the New Jersey State Teachers College at Montclair is engaged primarily in preparing secondary school teachers, during the present shortage of teachers in the elementary schools it was deemed expedient to offer courses in the field of elementary education for the undergraduates of the college leading toward certification to teach in these subjects. Under certain conditions the courses listed below may be used for graduate credit. Students should check with their advisers in this connection.

INTEGRATION 471. *Principles and Practices of Elementary Education*

This course is intended for students who already have a considerable subject-matter background in the fields of social studies, science, and mathematics. The course covers the principles and techniques for teaching these subjects in the elementary grades with special emphasis on the correlation of subject-matter and providing for the maturity level of the pupils.

Credit: 2 semester-hours

INTEGRATION 472. *Elementary School Curriculum*

This course acquaints the college student with the subject-matter of the elementary school curriculum for grades 3-6, inclusive.

Credit: 2 semester-hours

INTEGRATION 473. *Elementary School Language Arts*

This course gives an overview of modern practices that are used in teaching reading, creative writing, speaking, spelling, and handwriting in the elementary grades.

Credit: 2 semester-hours

INTEGRATION 477. *Elementary School Mathematics*

This course includes a study of the development of the number concept in young children, the problem of number readiness, and an analysis of the various number skills. Consideration is given to the development of methods of presenting the units of elementary mathematics to children.

Credit: 2 semester-hours

INTEGRATION 478. *Elementary School Science*

This course is based upon the assumption that science teaching in the elementary school should include scientific inquiry at the child's level as well as scientific information. Specific methods and materials are developed to meet these purposes.

Credit: 2 semester-hours

INTEGRATION 479. *Elementary School Social Studies*

This course is designed to familiarize the student with the materials and methods for teaching man's relation to his environment and other human beings in the elementary grades.

Credit: 2 semester-hours

DEPARTMENT OF MATHEMATICS

The primary objective of graduate study in the teaching of secondary mathematics is to meet the needs of teachers in service. This is done by giving such teachers a richer background in pure mathematics than they acquired in undergraduate study, by acquainting them with important applications of mathematics, and by leading them to make a careful study of current problems in the teaching and supervision of mathematics. To this end the candidate for a Master of Arts degree in the teaching of mathematics must select graduate courses from three classifications:

- a. *Pure Mathematics*: To give the teacher some acquaintance with important fields of higher mathematics.
- b. *Background*: To supply the teacher with knowledge of the uses of mathematics in other fields of human endeavor and with extensions of the mathematics taught in the junior and senior high schools to more advanced topics. This background information is valuable to the high school teacher as an enrichment of his teaching.
- c. *Teaching and Supervision*: To familiarize the teacher with important problems in supervision, with important research in the teaching of mathematics, and with current problems in the organization and conduct of classes in secondary school mathematics. The opportunity thus furnished for discussion of current problems of interest in the world of mathematical education makes it possible for the teacher to make well-considered decisions about courses of study, procedures, and techniques.

The teacher of secondary school mathematics who wishes to pursue graduate studies leading to the Master's degree should consult the Head of the Mathematics Department in choosing those courses which best supplement his previous training. Of the thirty-two graduate credits required for the degree, eighteen or more (the exact number depending on the candidate's previous training in mathematics) must be taken in the Department of Mathematics. In no case is a candidate matriculated for the degree who has not had courses in mathematics at least through differential and integral calculus.

A final examination in mathematics is given all candidates prior to the conferment of the degree. This examination is general in nature and is designed to test the candidate's maturity of thought in mathematics and in the teaching of mathematics.

In lieu of four of the required thirty-two credits, the candidate may write a thesis giving the results of some study in the field of mathematics or its teaching. This study must be made after consultation with the Head of the Mathematics Department and under the sponsorship of a member of the mathematics faculty. Plans should be made to have such a study in its final form and approved by the Department of Mathematics by March 1 of the year in which the degree is expected. The preparation of such a dissertation does not relieve the candidate of any of the required credits in mathematics.

A candidate who does not have a certificate to teach mathematics must have thirty undergraduate credits in mathematics before beginning graduate work. He should consult the Head of the Mathematics Department for advice in planning his work.

GRADUATE COURSES

MATHEMATICS 501A. *Administration and Supervision of Mathematics, Part I*

This course is concerned with the problems met in organizing and supervising the teaching of mathematics. There are considered the functions and qualifications of the supervisor of mathematics, in-service training of teachers, demonstration lessons, professional attitude and preparation of teachers, department meetings, selection of texts, current problems, research, and the basis for determining objectives.

Attention is paid to efficient methods of securing mastery of skills, the development of power in problem solving, and the organization of testing programs.

Credit: 2 semester-hours

MATHEMATICS 501B. *Administration and Supervision of Mathematics, Part II*

Particular emphasis is placed on such current problems of the high school as the organization of a four-year course in general mathematics, revision of the present college preparatory course, proposals for revision of, or changed emphasis in, the course in plane geometry, as well as suggestions for including some analytic geometry and calculus in the senior year. Reports of various commissions are also considered.

Credit: 2 semester-hours

MATHEMATICS 501C. *The Teaching of Advanced Secondary School Mathematics*

This course presents the best modern practices in teaching advanced algebra, trigonometry, solid geometry, and analysis in the last two years of the senior high school. Topics include: introducing trigonometry, teaching applications of trigonometry, variations in the sequence of topics, recent trends in the curriculum, the aims of teaching solid geometry, the elimination of certain subject matter and proofs, the use of algebra and trigonometry in solid geometry, making algebra *thinking* rather than *manipulation*, applications of advanced algebra, and the use of the function concept in unifying the mathematical knowledge of the student. A study is made of outstanding experiments in teaching these subjects and methods of adapting the material to the abilities and interests of the students.

Credit: 2 semester-hours

MATHEMATICS 503. *Foundations of Algebra*

Careful consideration is given to the fundamental concepts and postulates which form the foundation of algebra. Upon this basis the development of our number system is traced through the application of algebraic operations. Algebraic analysis supplies the criteria for the possibility of geometric constructions. Also a brief survey is given of the general theory and use of rational integral functions.

Credit: 2 semester-hours

MATHEMATICS 504. *Modern Algebra*

The modern algebraic theories of groups, rings, and number fields are studied. Particular attention is given to polynomials over a field, matrices and determinants, and the properties of linear independence and linear dependence.

Credit: 2 semester-hours

MATHEMATICS 505. *Consumer Mathematics: A Background for Teaching in the Junior High School*

This course aims to survey the field of consumer problems, to display mathematics as a powerful tool in analyzing these problems, and to consider the placement and methods of teaching this material in the intermediate grades and in the junior high school. Some of the topics included are: the cost of raising children; the money value of a man; the cost of owning or renting a home; insurance; pensions and social security; stocks, bonds, and the financial page; the quality and cost of consumer goods; business cycles and indices of business activity.

Credit: 2 semester-hours

MATHEMATICS 506. *Current Research in Secondary Mathematics*

A study is made of the findings of current research studies directly concerned with the teaching of secondary mathematics (grades 7—14) and of studies in the fields of arithmetic or of general education which affect the teaching of secondary mathematics. The effects of these studies on syllabi and on textbooks are also studied.

Credit: 2 semester-hours

MATHEMATICS 507. *The Teaching of General Mathematics*

A study is made of the reports and recommendations affecting courses in general or integrated mathematics in secondary schools and in junior college. Methods of teaching classes in general mathematics are studied when such methods differ from those used in the sequential courses, as well as the variations in subject matter in different courses.

Credit: 2 semester-hours

MATHEMATICS 509A. *A Critical Interpretation of Mathematics in the Senior High School, Part I*

An opportunity is here offered for an investigation and interpretation of the algebra and geometry of the secondary school. The meaning and use of secondary mathematics are stressed, rather than the methods of teaching. Among the topics discussed are: algebra as a thought process and not a mechanical operation, types of thinking in algebra and geometry, fundamental laws of arithmetic, algebra as generalized arithmetic, geometrical interpretation of algebra, the function concept in algebra and geometry, the changing scope and subject-matter of Euclidean geometry, limits and incommensurables, and integration (i. e., correlation and fusion) of all secondary mathematics.

Credit: 2 semester-hours

MATHEMATICS 509B. *A Critical Interpretation of Mathematics in the Senior High School, Part II*

Among the topics discussed are: the development and use of the limit concept in secondary mathematics; the introduction of analytic geometry and calculus; the geometry of space; permutations and combinations; the elements of probability and statistics. The subject matter is adapted to the secondary level and treated from the professional viewpoint.

Credit: 2 semester-hours

MATHEMATICS 509C. *A Critical Interpretation of Mathematics in the Junior High School*

The aim of this course is to give teachers a deeper insight into the subject-matter usually taught in the seventh, eighth, and ninth grades. Among the topics considered are: the nature of graphs, an intuitive and experimental approach in geometry, the arithmetic and algebra for social use and interpretation, approximate measures and mensuration, and integration with other subject fields. The course is open to all junior and senior high school teachers and those elementary school teachers who have had two years of high school mathematics.

Credit: 2 semester-hours

MATHEMATICS 510A. *Mathematics in its Relation to Other Fields of Knowledge: Social Sciences*

This course examines some of the fundamental topics that are common to both mathematics and social studies and considers the integration of these topics in the secondary school curriculum. Topics studied include: measurement in social science; presentation of social data; use of index numbers; distribution of wealth and income; concept of utility; supply and demand curves; break-even charts; theory of interest and investment; probability and expectation, insurance, social security, and pensions; analysis of time series and business cycles.

Credit: 2 semester-hours

MATHEMATICS 510B. *Mathematics in its Relation to Other Fields of Knowledge: Science, Art, and Music*

In this course there are introduced such topics as mechanics and vector analysis, wave motion, geometrical optics, weather forecasting, mathematics in biology, chemistry, medicine, and geology; phyllotaxis (leaf arrangement in plants), spirals, laws of growth; static and dynamic symmetry, perspective, designs; and mathematics in music. Many of these topics should serve to enrich the background of secondary school teachers and encourage further study in special fields.

Credit: 2 semester-hours

MATHEMATICS 510C. *Mathematics in its Relation to Other Fields of Knowledge: Geography, Astronomy, and Navigation*

An opportunity is here offered for mathematics teachers to become acquainted with the mathematics of mapping, astronomy, and navigation closely related to the algebra, solid geometry, and trigonometry

taught in high school. A study of spherical geometry and trigonometry leads to topics in mathematical astronomy and geography, and to navigation. The discussion includes such topics as: latitude and longitude; time and the calendar; map projections; the making of star maps; sizes and distances of the sun, moon, planets, and stars; weighing the earth and moon; and relativity.

Credit: 2 semester-hours

MATHEMATICS 511A. *Foundations of Geometry*

A careful study is made of the fundamental postulates and basic principles underlying Euclidean synthetic and projective geometries. Past and present trends in this field and the resulting modifications are considered in connection with the historical background of each. Finally, the development of the subject is briefly traced through certain fundamental groups of associated theorems and their generalizations.

Credit: 2 semester-hours

MATHEMATICS 511B. *Non-Euclidean Geometry*

The development of Hyperbolic-Non-Euclidean and of Elliptic Non-Euclidean geometry is carefully traced. A brief survey of the historical development of each is given. This course is designed for teachers and students of mathematics who desire a better perspective of the field of geometry.

Credit: 2 semester-hours

MATHEMATICS 512. *Methods of Approximation*

This course deals with the determination of functions from observed experimental data. Among the topics considered are: finite differences, symbolic operators, differencing, interpolation formulae, the Gamma function, and the Euler-MacLaurin formula. The course is designed to show the nature of mathematics as an applied science.

Credit: 2 semester-hours

MATHEMATICS 515. *Differential Equations*

This course is a continuation of the calculus considered from a new view-point. Various applications of differential equations and their standard methods of solution are fully treated in this course. Among the topics included are: linear differential equations of the first degree and of the first and higher orders, linear equations of the n th order with constant coefficients, linear equations of the second order, exact and total differential equations, simultaneous equations, numerical approximation, and partial differential equations.

Credit: 2 semester-hours

MATHEMATICS 516. *The Theory of Functions*

This course gives an introduction to the theory of functions of real and complex variables. This includes the properties of: continuity, differentiability, integrability, line integrals, Green's Theorem, Cauchy's Integral Theorem, and other general properties of analytic functions.

Credit: 2 semester-hours

MATHEMATICS 517. *The Theory of Numbers*

This course offers a systematic treatment of certain fundamental properties of numbers. It includes such topics as: properties of integers; prime numbers; composite numbers; factorization; relatively prime numbers; properties of congruences and their solutions; fundamental theorems of Fermat, Euler, Wilson, Gauss, etc.; primitive roots of a congruence; quadratic residues; and certain types of Diophantine equations.

Prerequisite: Two years of college mathematics

Credit: 2 semester-hours

MATHEMATICS 521. *Analytical Mechanics*

The fundamental basic principles of this course are Newton's laws of motion, whose applications and consequences are carefully considered in the study of such topics as: the composition and resolution of forces, the statics of a particle and of a rigid body, forces acting upon a body, friction, straight line motion, curvi-linear motion, work and energy, moment of inertia, etc. The need and usefulness of mathematics for the explanation of physical phenomena are clearly shown.

Prerequisite: Elementary calculus

Credit: 2 semester-hours

MATHEMATICS 523. *The Theory of Probability*

In this course the applications of the theory of probability to life insurance, statistics, mechanics, and genetics are stressed. Special attention is paid to the implications of probability in secondary school mathematics, and to the teaching of probability in the senior high school. The ideas of choice in combinations and permutations are developed. The intuitive ideas and the classic paradoxes in the historical development of the theory are also considered. Additional topics considered are: continuous probability, the normal probability curve, and geometric probability. It is assumed that students taking this course have an understanding of college algebra and the elementary ideas of calculus.

Credit: 2 semester-hours

MATHEMATICS 524. *Statistical Inference and Sampling Theory*

In this course the student considers the planning and execution of a statistical study. Among the topics considered are: moments and moment generating functions; binomial, Poisson, and normal distributions; the general theory of sampling; student's distribution; chi-square distribution; analysis of variance and co-variance; statistical control; and the design of experiments. The development of statistical reasoning is an important aim of the course. Applications are given to industrial, scientific, and social data.

Prerequisite: MATHEMATICS 408

Credit: 2 semester-hours

MATHEMATICS 528. *Mathematics Materials for Student Activities and Club Programs*

This course analyzes some of the large amount of material available for individual and club activities in mathematics. Mathematical recreation, plays, topics for essays or club programs, and popular books on mathematics are studied. The material considered varies from elementary arithmetical recreations for the elementary school to topics involving advanced mathematical ideas. Topics considered are: recreations; arithmetical, geometrical, and logical problems in arrangement, polyhedrons and crystallography, classical problems of antiquity, cryptography, magic squares, topological and unicursal problems.

Credit: 2 semester-hours

MATHEMATICS 529. *Curriculum Construction in Mathematics*

This course is conducted as a workshop or seminar in constructing curricula in mathematics. The chief objective of the course is cooperation with those communities which are planning changes in their courses of study. Among the topics considered are: the selection of aims, a study of recent courses of study in mathematics, the reports of various commissions, and other research pertinent to the questions at issue.

Credit: 2 semester-hours

MATHEMATICS 530. *Mathematical Materials and their Applications in the Teaching of Mathematics*

In this course the student considers the adaptation and use of multisensory materials to motivate and improve the teaching of high school mathematics. Particular attention is given: to the equipment needed for the modern mathematics laboratory and how it may be effectively used; to plans for the extra-curricular activities in mathe-

matics, such as mathematics clubs and assembly programs; to such visual aids as pictures, lantern slides, motion pictures, and bulletin board exhibits; and to the books, periodicals, and pamphlets needed for the school and the teacher's library.

Credit: 2 semester-hours

MATHEMATICS 531. *Survey of Higher Mathematics*

The principal aim of this course is to give the student some insight into the nature and content of various fields of higher mathematics. This includes a discussion of the basic structure and framework of the following branches of higher mathematics: foundations of logic, higher algebra and algebraic theories, theory of groups, synthetic and analytic projective geometries, differential geometry, N-dimensional geometry, topology, vector analysis, and calculus of variations.

Credit: 2 semester-hours

MATHEMATICS 601. *Workshop: Current Problems in the Mathematics Field*

This course is conducted as a workshop for the solution of such actual problems in the teaching of mathematics as: courses in mathematics for the general and for the specializing student; integration of mathematics with other courses; revision of subject-matter in particular fields, such as in plane geometry; and research problems in specific units of work. The class meets for conferences, reports, and lectures. Individual conferences between the instructor or consultant and each individual member of the class are held by appointment.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

MATHEMATICS 401. *The Teaching of Mathematics in Secondary Schools*

The student studies the methods of teaching the different units of work in the junior and senior high school. He accompanies this study by observing in the College High School the ways in which these methods are put into practice.

Credit: 3 semester-hours

MATHEMATICS 402. *Applications of Mathematics*

The student is taught how to use and adjust those modern instruments of precision which can be used to motivate the teaching of mathematics in the junior and senior high school. Included among these are the slide rule, transit, sextant, planimeter, plane table, solar telescope, and astronomical telescope with equatorial mountings. Such early instruments as the astrolabe, hypsometer, baculum, and optical square are also considered.

Credit: 4 semester-hours

MATHEMATICS 404. *Readings and Lectures in Mathematics*

Lectures are given upon advanced topics in mathematics and on those phases of mathematics which are finding new applications, especially as they are related to the secondary field.

Credit: 2 semester-hours

MATHEMATICS 405. *The History of Mathematics*

A cultural background in the field of elementary mathematics is furnished by this course. Emphasis is placed on the history of the development of the number systems of elementary mathematics, computational devices, mathematical symbolism, space concepts, and simple logical processes.

Credit: 2 semester-hours

MATHEMATICS 406. *Solid Analytic Geometry*

A review and extension of the theory of determinants, a study of lines and planes in space, of space coordinates, transformation of coordinates, loci in space, the sphere, and of quadric surfaces are considered in this course. The study of the general quadratic equation in three variables, invariance under motion, and the classification of numerical equations completes the course.

Credit: 2 semester-hours

MATHEMATICS 407. *Advanced Calculus*

A study of continuity, the theory of limits, the generalized theorem of the mean, and its extension to series with a remainder term is made in this course.

Credit: 2 semester-hours

MATHEMATICS 408. *An Introduction to Elementary Mathematical Statistics*

This first course covers the usual topics in statistics using calculus as a major tool in the derivation of formulæ.

Credit: 2 semester-hours

MATHEMATICS 410. *Mathematics of Finance*

This course introduces the student to the elementary theory of simple and compound interest and leads to the solution of practical problems in annuities, sinking funds, amortization, depreciation, stocks and bonds, installment buying, and building and loan associations.

Credit: 2 semester-hours

DEPARTMENT OF SCIENCE

The teacher of secondary school science is faced constantly with the problem of maintaining his professional competence with respect to recent advances in the fields of science and science education.

The past two decades have brought forth an astonishing array of new discoveries in biology, chemistry, physics, and other branches of science. Entirely new scientific points of view have to be considered by a teacher who wishes to keep his classroom practices up to date with the most recent findings as reported in current newspapers, magazines, and books.

The unusual growth of enrollment in secondary schools has brought the science teacher numerous difficult problems of science education which require a more scholarly background than has been necessary in previous decades. It is clear that the demands to be made upon the science teacher in the near future will greatly exceed those of any previous decade. A thorough knowledge of science and secondary education is necessary to professional success and promotion.

Other factors operate to multiply the problems of high school science teachers. The rapid growth of work in science in elementary schools and the extraordinary growth of junior high school science preparation foreshadow a fundamental reorganization of the senior high school science program. This work is now well under way in many sections of the country. The courses offered here are designed to help the science teacher meet these changing needs.

Prior to matriculation in the Science Department for the Master of Arts degree the student should complete a subject matter background of thirty semester-hours of college science distributed in the areas of biology, chemistry, and physics. Deficiencies must be made up prior to the conferment of the A. M. degree. A minimum of eighteen semester-hours of graduate credit work in science is required. SCIENCE 401 and SCIENCE 404 will not be accepted toward meeting this eighteen semester-hour departmental requirement. Twelve of these eighteen semester-hours shall include courses carrying laboratory work or the equivalent. The student is required to take a minimum of six semester-hours in INTEGRATION courses including INTEGRATION 503, Methods and Instruments of Research. This usually leaves eight semester-hours free for electives. The student's work program is prepared in cooperation with the science adviser. Any changes in the student's work program are made only with the written approval of the science adviser.

BIOLOGY

GRADUATE COURSES

BIOLOGY 501. *The Teaching of Biology in Secondary Schools*

This is a seminar and research course designed to give opportunity for study of the best methods and practices being used in the teaching of secondary school biology. Major topics of discussion are: aims of secondary school biology, course content, functions of textbooks, testing, laboratory exercises and demonstrations, and the collection and use of suitable and available laboratory materials. A study is made of recent research studies in the field of biology teaching.

Prerequisite: 18 semester-hours of work in biology

Credit: 3 semester-hours

BIOLOGY 508. *Social Applications of Biology*

This field-study course offers to teachers of science an opportunity to gain first-hand knowledge of the uses made of biological principles in industry and in modern laboratories. Field trips are designed to cover such varied interests as public health and hospital routine laboratories, medical botanical research laboratories, and the inspection of model industries developing biological products.

Prerequisite: 18 semester-hours of work in biology

Credit: 4 semester-hours

BIOLOGY 509. *Field Studies of Flowering Plants*

The emphasis of this course is placed upon the methods of identification of higher plants and the ecological factors affecting the growth and development of these plants. Plants in their winter conditions are considered first. As the season progresses, the emphasis changes from the identification of woody to herbaceous forms. Plant communities of various types are observed, and the factors influencing their development are discussed. Field trips are taken to such typical habitats as the Pine Barrens, Troy Meadows, Raritan, and others. The preparation of herbaria is stressed, and techniques for making leaf and twig collections are demonstrated.

Prerequisite: General botany

Credit: 4 semester-hours

BIOLOGY 402. *Mammalian Anatomy and Histology*

A study is made of the gross structure of a typical mammal and of the structural peculiarities of its various tissues. This course prepares the student for the study of human physiology.

Prerequisites: BIOLOGY 201 and 202, zoology

Credit: 4 semester-hours

BIOLOGY 406. *Animal Histology*

This course includes a careful study of histological technique as illustrated by preparations made from various animal tissues.

Prerequisites: BIOLOGY 201 and 202, zoology

Credit: 4 semester-hours

BIOLOGY 407. *Comparative Embryology*

A study is made of the stages in development and factors influencing the development of different types, particularly the vertebrates. Students in this course follow carefully the development of the chick through the earlier stages.

Prerequisite: BIOLOGY 402, mammalian anatomy and histology

Credit: 4 semester-hours

BIOLOGY 408. *Biological Technique*

This course is designed to furnish the prospective teacher of biology with the technical details necessary to enable him as a secondary school teacher to handle successfully biological materials and experiments and demonstrations in which these materials are employed.

Prerequisites: BIOLOGY 101 and 102, botany, and BIOLOGY 201 and 202, zoology

Credit: 4 semester-hours

BIOLOGY 409. *Human Physiology*

A study is made of normal and abnormal physiology based on previous study of mammalian anatomy. In addition to an analysis of the part played by organs and tissues in carrying out the essential functions of the body, special attention is given to problems of hygiene and sanitation.

Prerequisite: A course in comparative anatomy or BIOLOGY 402

Credit: 4 semester-hours

BIOLOGY 410. *Comparative Anatomy of the Vertebrates*

The aim of this course is to trace the probable course of evolution of the vertebrate type with partial reference to the history of the human body.

Prerequisites: BIOLOGY 201 and 202, zoology

Credit: 4 semester-hours

BIOLOGY 412. *Genetics from Mendel to Lysenko*

This course considers the scientific basis of the gene concept and its support in experiment from Mendel's work to the present allegations of the Lysenko school. Documents of some of the milestones in the history of the science are studied, and the adherence to scientific method is carefully noted. The wide uses of the science in plant and animal improvement and the discoveries related to man's heredity make an integral part of the study. The course helps the teacher of biology or social studies to discriminate between what is scientifically known and what is political philosophy in genetics. Laboratory exercises supplement lectures and discussion.

Prerequisite: A course in college biology

Credit: 2 semester-hours

BIOLOGY 413. *Economic Botany*

The discussion of the importance of plants and plant life to the world in general and to man in particular is the principal aim of this course. The economic importance of bacteria, fungi, and other lower plants is considered as well as that of the seed plants. The student should have a knowledge of general botany for an understanding of this course.

Prerequisite: One year of general botany

Credit: 2 semester-hours

CHEMISTRY

GRADUATE COURSES

CHEMISTRY 501. *The Teaching of Chemistry in Secondary Schools*

This course satisfies the requirements in the teaching of chemistry for the limited secondary certificate. A study is made of the objectives, recent trends, methods of presentation, courses of study, lesson planning, instructional aids, and subject matter of high school chemistry.

Prerequisite: 18 semester-hours in chemistry

Credit: 3 semester-hours

CHEMISTRY 508. *Advanced Organic Chemistry—Biochemistry*

In this course a study is made of the composition of living organisms, their nutritional requirements, their mechanism for promoting and regulating chemical action, and their metabolism of foods. A

laboratory study is made of the components of foods, enzyme action, isolation of proteins, etc., blood and urine analysis.

Prerequisites: CHEMISTRY 405 and 406, organic chemistry

Credit: 4 semester-hours

CHEMISTRY 509. *Advanced Inorganic Chemistry*

This course offers opportunity for intensive and systematic study of the elements in the light of the periodic classification. Selected theories and principles of inorganic chemistry and some of their applications are studied in detail. A study is made of compounds. Directed use of chemical literature is an important part of this course. Individual experimental work in the laboratory consists chiefly of preparation and purification of inorganic compounds and testing for impurities.

Prerequisite: A course in quantitative analysis

Credit: 4 semester-hours

CHEMISTRY 510. *Food Inspection and Analysis*

A study is made of the composition of commercial food products, the laws governing purity and marketing of foods, methods of analysis of foods and cosmetics, and the judging of foods for quality.

Prerequisites: Organic chemistry and quantitative analysis

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

CHEMISTRY 405. *Organic Chemistry, Part I*

The course covers the chemistry of carbon compounds and gives increased facility and experience in manipulating complicated chemical apparatus. It treats of the role of chemistry in life processes, including the synthesis and adaptation of carbon compounds in industry, in medicine, and in daily living. The first semester's work covers the chemistry of simple chain compounds and includes fats and carbohydrates.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry

Credit: 4 semester-hours

CHEMISTRY 406. *Organic Chemistry, Part II*

The work of this course covers the chemistry of multiple functional chain compounds, the ring compounds, vitamins, hormones, and the application of these compounds in industry, in foods, and in medicine.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry

Credit: 4 semester-hours

CHEMISTRY 407. *Advanced Quantitative Analysis*

This course is adapted to the needs and preparation of students. The student, after consultation with the instructor, may select analyses from the following: general or special types of oxidation-reduction; gravimetric methods; colorimetric methods; use of organic reagents in analyses; electrometric titrations; conductimetric titration; spectrographic methods of analysis; electrodeposition of metals; and special methods of analysis.

Prerequisites: General college physics and one semester of quantitative analysis, or special permission of the instructor

Credit: 4 semester-hours

CHEMISTRY 408A. *Industrial Chemistry, Part I*

The purpose of this course is to enable science teachers to understand the type of chemical industries in the State of New Jersey and the nature of their problems. A survey is made by lectures, reports, and trips to plants of the chemical industries in the State. This section of the course stresses the importance and the characteristics of chemical industries, the various unit operations used by the industries to carry out chemical reactions, the controls used to insure quality, organization for research, and the type of workers employed.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 408B. *Industrial Chemistry, Part II*

This course is a study of the chemical industries of the metropolitan area utilizing the methods outlined in CHEMISTRY 408A. Also, a study is made of the economics of chemical industry, chemistry and industry in general, and the effects of chemical discoveries upon living conditions.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 411. *Physical Chemistry, Part I*

This course, the first half of a year's work in physical chemistry, deals with gases, liquids, crystals, physical properties and electrolytes, colloids, thermochemistry, and homogeneous and heterogeneous equilibria.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry, CHEMISTRY 202, analytical chemistry, and PHYSICS 101 and 102, general college physics

Credit: 4 semester-hours

CHEMISTRY 412. *Physical Chemistry, Part II*

This course deals with electrical conductance, electrolytic equilibrium, electromotive force, electrolysis, polarization, chemical kinetics, photo-chemical reactions, atomic structure, molecular structure, and radioactivity.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry, CHEMISTRY 202, analytical chemistry, and PHYSICS 101 and 102, general college physics

Credit: 4 semester-hours

CHEMISTRY 413. *Atomic Structure and Atomic Energy*

This is a lecture course designed to familiarize the student with a modern conception of the structure of matter and to acquaint him with some significant aspects of atomic energy. Some of the topics studied include the following: discoveries leading to knowledge of the structure of the atom; isotopes; nuclear fission; nuclear reactions; chemical versus atomic explosions; the chain-reacting pile; production of plutonium; detection and measurement of nuclear radiation and incendiary effects of atomic explosions; atomic energy for peace-time uses; radioactive isotopes in agricultural, biological, and chemical research; and availability of materials for atomic energy.

Prerequisites: General college chemistry and general college physics, or special permission of the instructor

Credit: 2 semester-hours

PHYSICS
GRADUATE COURSES

PHYSICS 510. *Advanced Problems in Photography*

This course is intended to meet the needs of the camera club teacher and the hobbyist. The course includes negative and positive alterations, toning, printing processes, studio portraits, color photography, and photomicrography. The student is expected to submit prints of exhibition quality for public showing.

Prerequisites: General college physics, general college chemistry, and a first course in photography

Credit: 4 semester-hours

PHYSICS 511. *Electronics and Electron Tubes*

It is the aim of this course to give an understanding of the basic principles of electronics. Such appliances as radio tubes, cathode-ray tubes, photo-electric cells, and X-ray tubes with applications in medicine are considered.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 512. *Modern Physics*

This course is a survey of recent experimental research in physics and of the newer theories concerning nuclear physics and electricity. Such topics as atomic spectra, radioactivity, artificial transmutation of the elements, and cosmic rays are discussed.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 513. *Nuclear Radiation*

A study of the nature of radiations is made. Particular attention is made to radiation measurement technique. The course is concluded with a study of health physics as related to radiation dosages and their effects. Some attention is paid to disposal of radioactive wastes, radiation protection, and safety precautions.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

PHYSICS 402. *Advanced Electricity*

The most important aims and purposes of the course are as follows: (1) to provide a substantial background of training in the fundamental laws and principles governing the generation and use of electricity; (2) to develop skill in manipulating laboratory and demonstration apparatus; and (3) to offer opportunity for the exercise of originality in devising methods for the interpretation of experimental data.

Prerequisites: PHYSICS 101 and 102 and CHEMISTRY 101 and 102

Credit: 4 semester-hours

PHYSICS 405. *Light and Optical Instruments*

Topics included for study in the classroom and laboratory are: the propagation of light; emission and absorption of radiant energy; reflection, refraction, polarization; spectrum analysis; photometric measurements; photoelectric cells; measurement of high temperatures; characteristics of illumination, modern illuminants; and industrial and domestic uses of light.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 406. *Astronomy*

The course consists of a study of the fundamental principles of the science of astronomy. Such topics as the following are considered: motions of the earth; time; the moon; law of gravitation; the planets; comets; meteors; the sun; evolution of the solar system; the constellations; distances and motions of the stars; spectrum analysis; and telescopic observations.

Prerequisites: General college physics and college chemistry

Credit: 4 semester-hours

PHYSICS 407A. *Aviation, Part I*

This course deals with the historical development of aviation, air traffic rules, airworthiness regulations, pilot certification, types of aircrafts, aircraft structures, principles of aerodynamics, lift, drag, stability, motions of an airplane, piloting, motorless flight, and air-

craft engines. Flight experience is made available as a part of this course.

Prerequisite: General college physics

Credit: 2 semester-hours

PHYSICS 407B. *Aviation, Part II*

This course continues the study of the topics considered in PHYSICS 407A and also develops an understanding of power performance, propellers, engine instruments, and flight instruments. Flight experience is made available as a part of this course.

Prerequisite: General college physics

Credit: 2 semester-hours

PHYSICS 408. *Advanced Aviation*

This course consists of the study of navigation; meteorology as applied to flight operations; radio communications; flight and navigational radio aids; instrument flights; jet, turbojet, and rocket flight; and recent advancement in aviation.

Prerequisite: PHYSICS 407

Credit: 4 semester-hours

PHYSICS 409. *Introduction to Radio Communication*

This course deals with direct and alternating current circuits; construction and operation of detectors; characteristics of audio and radio frequency amplifiers; vacuum tubes; and two-way communication in aviation.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 410. *Physical Principles in Automotive Transportation*

This course deals with the following topics: engine theory and design, cooling system, ignition, fuel system, motors and generators, wiring and lighting, storage battery, and transmission.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 411. *Photography*

This course consists of laboratory work and field work supplemented by lectures and demonstrations. Emphasis is placed on

physical principles in the construction of cameras, projection printers, tanks, and filters. Special attention is given to chemical principles in the development of films and paper, toning, intensification, and reduction.

Prerequisites: General physics and general chemistry

Credit: 4 semester-hours

SCIENCE

GRADUATE COURSES

SCIENCE 504. *Survey of Recent Investigations in Science Teaching*

This course deals with published and unpublished investigations in the field of science education. Studies of demonstration methods, curriculum construction, scientific vocabularies of texts, laboratory design, measurement of the outcomes of learning, laboratory apparatus, prediction of success in college courses, methods of visual instruction, and other topics are considered.

Prerequisite: State certification in science

Credit: 4 semester-hours

SCIENCE 505. *Science Workshop for Junior and Senior High Schools*

This course is designed to assist principals, supervisors, and teachers to organize and develop a program of science courses in keeping with present-day science knowledge and the interests of students in recent scientific developments.

Prerequisite: State certification in science

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

SCIENCE 401. *The Teaching of Science in Secondary Schools*

The chief purposes of this course are: to review the educational objectives of science in public schools; to consider a program of instruction planned for all grades of the public school system; to study the chief aids to instruction such as texts, manuals, workbooks, tests, and materials for the enrichment of teaching; to make a critical review of standards of classroom and laboratory instruction; to observe junior high school classes at work in science; and to participate in classroom activities in biology, chemistry, and physics

prior to student-teaching. This course is required of all undergraduate science majors.

Prerequisites: See the undergraduate bulletin for required courses in biology, chemistry, and physics

Credit: 3 semester-hours

SCIENCE 401D. *The Teaching of Aviation in Secondary Schools*

This course covers the study of State aviation programs, texts, bulletins, free material for school use, demonstration equipment, tests, working models, visual aids, and references needed to teach aerodynamics, aircraft engines, meteorology, navigation, and aircraft communication in high schools. Field trips to airports and aviation industries are included.

Credit: 2 semester-hours

SCIENCE 404. *Problems in the Teaching of Science*

When a student has completed the assignment in student-teaching in a public high school in the State of New Jersey and has accumulated some experience with the problems of high school science instruction, he returns to the college campus for an intensive study of a limited number of problems in a single field of science.

Prerequisites: See the undergraduate bulletin for required courses in biology, chemistry, and physics

Credit: 2 semester-hours

SCIENCE 405. *Field and Laboratory Studies in Science*

This integrated course is designed to show the relationship in the geological rock formations, the types of soil, water patterns, plant communities, and animal inhabitants in northern New Jersey, and the effects on human occupations. The field trips are for the purpose of gathering data and materials for intensive work in the laboratory. The experiments are designed to give the student acquaintance with the science of common but possibly unstudied features of the landscape, e. g., soils are reproduced in profile and examined microscopically, physically, and chemically; water from a variety of sources is tested for biological and chemical impurities; the census of plant and animal inhabitants of typical areas is associated with relevant factors in the environment. Discussions precede and follow the field and laboratory work to establish the probable history of the area and to suggest the probable trend, whether advancing or retrogressing, of its development. Stress is placed on the kinds of human control in specific communities which would best serve their progress.

Students are asked to submit an analysis of the geological and biological features of some known community, based on the skills and principles involved in the course. Some other objectives of the course include an understanding of the organization of school museums for learning purposes, the making of ecological maps and illustrating them with photographs and diagrams, and the techniques of ecological field trips. Two instructors, a chemist and a biologist, collaborate in giving this course.

Prerequisite: Proficiency in biology and chemistry

Credit: 4 semester-hours

SCIENCE 410. *Junior High School Science Demonstrations*

This course covers the methods of experimental instruction in grades seven, eight, and nine. A detailed study is made of about three hundred demonstrations.

Prerequisites: General college chemistry, college physics, and a course in general biology

Credit: 4 semester-hours

SCIENCE 411. *Problems in Field Studies in Science*

In this course each student selects a phase of field science in which he does advanced research under the guidance of the instructor. Plant ecology, bird-life, pond life, fungi, tree diseases, and insect life are a few of the areas from which the student may choose.

Prerequisites: SCIENCE 405, Field and Laboratory Studies in Science, or its equivalent plus at least 12 points in biology

Credit: 2 semester-hours

SCIENCE 412. *Field Studies in Science: Biological*

Emphasis in this course is given to the ecology, life-history, and identification of plant and animal communities (terrestrial and aquatic) with an introduction to their conservation.

Credit: 2 semester-hours

SCIENCE 413. *Field Studies in Science: Physical*

Emphasis in this course is given to local and New Jersey geology, minerals, soils, and waters, with emphasis on the chemical and physical aspects of soil and water. Field trips are taken through the Kittatinny Mountains and to the Delaware Water Gap.

Credit: 2 semester-hours

SCIENCE 414. *Conservation of Plants and Animals*

The social, economic, and ecological implications of plant and animal conservation are considered together in this course. Discussion periods are interspersed with field trips to forests and wildlife management areas. Co-operating experts from State and Federal agencies bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 415. *Conservation of Soil and Water*

The social, economic, and ecological implications of soil and water conservation are considered together in this course. Discussion periods are interspersed with field trips to selected areas. Outside experts bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 416. *Problems in Conservation*

In this course, a student or a group of students selects a phase of conservation in which he or the group does original research, either at the School of Conservation or within New Jersey. The research may be done any time during the summer with the approval of the instructor. This course is intended primarily to encourage individuals or groups from institutions of higher learning in New Jersey to use the School of Conservation as a base for research in conservation. Enrollment is limited and subject to advanced approval. Fees are determined by the number of hours of credit allowed and the number of days or weeks spent in research.

Credit: To be determined by length of stay and nature of problem

DEPARTMENT OF SOCIAL STUDIES

The teacher of social studies works in a field the boundaries of which are constantly changing and expanding. The necessity for constant study, especially with regard to the contemporary social situation and its problems, presses upon every secondary school teacher of the social studies. The Social Studies Department at Montclair intends to provide for such teachers courses of an advanced character which will help to keep them abreast of the changes in a changing world. It also will provide advanced courses for those teachers who wish to increase their preparedness in specialized secondary school subjects. Finally, it aims to provide for the teacher-in-service an opportunity for keeping informed concerning the changing techniques and problems of teaching the social studies. Selections from advanced courses of the sort just described lead to the Master's degree in the social studies.

In order to qualify for the Master's degree in social studies, candidates will either prepare a thesis or pass an oral examination based upon a selected field of research. They will earn at least eighteen semester-hours of credit in social studies courses on the 400 or 500 level, selected with the approval of the Head of the Department. They must submit credits equivalent to an undergraduate major in social studies, totaling at least thirty semester-hours, as a prerequisite to matriculation for graduate study.

GRADUATE COURSES

SOCIAL STUDIES 502. *The Origin and Development of the American Constitution*

This course is an intensive study of the origin and framing of the Constitution of the United States. It aims to search out the roots and influences that determined our basic political institutions. The seminar method is employed and attention is given to the techniques of historical research and historical writing.

Credit: 2 semester-hours

SOCIAL STUDIES 506. *The British Empire from 1783*

This course deals with the evolution of the British Empire from the period of the old Colonial system to the present British Commonwealth of Nations. The rise of dominion government, the forces of anti-imperialism, and the various solutions suggested from the improvement of imperial relations are stressed.

Credit: 2 semester-hours

SOCIAL STUDIES 515. *History of Political Thought*

The major theories of representative political philosophers concerning the nature, functions, organization and sovereignty of the state are studied in this course. Among those discussed are: Plato, Aristotle, Cicero, Thomas Aquinas, Machiavelli, Luther, Calvin, Bodin, Hobbes, Locke, Spinoza, Montesquieu, Rousseau, Hume, Bentham, J. S. Mill, Burke, Hegel, Marx.

Credit: 2 semester-hours

SOCIAL STUDIES 517. *Money and Banking*

An opportunity is provided for an analysis of the monetary and banking principles and practices basic to modern economic organization. Consideration is given to the various theories of money, the relation of money to prices, banking systems and their operation, and the nature and significance of credit. Special attention is directed to an examination of the functioning of the Federal Reserve System in relation to the gold standard, a managed currency, stability, inflation and deflation.

Credit: 2 semester-hours

SOCIAL STUDIES 518. *Recent Trends in American History (1918 to the present)*

Without attempting to reach final conclusions, this course analyzes the major problems which have influenced American life since the First World War. The new position of the nation in world affairs, the modifications of the old economic order, the progress of social and political change are all surveyed. While the treatment is historical, it is intended to present materials which are serviceable in teaching the Problems of American Democracy.

Credit: 2 semester-hours

SOCIAL STUDIES 522. *The Development of Economic Institutions and Ideas*

This course deals with the changing principles, institutions and ideas which determine the character of economic society. The doctrines of the more important schools of economic thought such as the Classical, Historical, and Institutional groups are emphasized, and the teachings of the Mercantilists, Physiocrats, Adam Smith, Malthus, Ricardo, Marx, Henry George, Veblen, Hobson, Commons, Keynes, and others are examined in relation to the important problems of money, credit, prices, business cycles, foreign and domestic commerce, property, wages, the nature of wealth and value, and economic planning.

Credit: 2 semester-hours

SOCIAL STUDIES 523. *The Economics of the Business Cycle*

The purpose of this course is to consider the nature of business cycles and their impact on the national economy, to survey business cycle theories, and to analyze the significant proposed methods of control for the purpose of developing a desirable public program conducive to economic stability.

Credit: 2 semester-hours

SOCIAL STUDIES 524. *The Economics of Public Fiscal Policy*

This is a course for the mature student interested in the effect of government tax policies on the national economy. Consideration is given to the various theories of justice in taxation: the incidence and shifting of the tax burden; the constitutional aspects of government finance; fiscal policy and full employment; taxation and economic inequality; the economics of public borrowing; and management of the national debt. Particular emphasis is placed on the conflicting issues which have arisen from the increasing encroachment of public finance on both business and the consumer due to war and recurrent depressions. Attention is also given to such special programs as the Marshall Plan and aid to underdeveloped economic areas.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions see the undergraduate catalog.

ANCIENT AND MEDIEVAL HISTORY

SOCIAL STUDIES 421. *Oriental Civilization*

This course presents the important contributions to civilization and social progress made in antiquity in three great centers of the Near East: Egypt, Mesopotamia, and Crete.

Credit: 2 semester-hours

SOCIAL STUDIES 422. *Greek Civilization*

The aim of this course is to present the development of Greek civilization from the earliest period to the beginning of the Christian era.

Credit: 2 semester-hours

SOCIAL STUDIES 423. *Roman Civilization*

This course traces the social changes in Rome from the earliest times to the end of the Western Roman Empire. The rise and fall of the empire are discussed with relation to their importance in medieval civilization.

Credit: 2 semester-hours

SOCIAL STUDIES 424. *Medieval Civilization*

This course aims to trace the history and civilization of the different races which wandered about and finally settled in Europe during the medieval period.

Credit: 2 semester-hours

SOCIAL STUDIES 426. *Medieval History to 1498*

In the first part a study is made of the factors contributing to the political breakdown of the imperial principle, such as the growth of Christianity, barbarization of the West, and the expansion of Islam. The second part is devoted to the developments in Western Europe after 1200, stressing political movements, medieval commerce, guilds, growth of towns, and cultural changes.

Credit: 4 semester-hours

SOCIAL STUDIES 427. *Ancient History to 378 A. D.*

The first part of this course covers the Oriental period and the Greek through the Periclean Age. The second part covers the Hellenistic period from the rise of Philip of Macedon, stressing attempts at federalism.

Credit: 4 semester-hours

SOCIAL STUDIES 473. *The Arts in Western Civilization*

This course is designed to show how the social, economic, political, and religious movements in Western Civilization influenced the aesthetic expression of Europe from the Golden Age of Greece to the Rise of the Industrial Revolution. Greek, Roman, Byzantine, Gothic Baroque, and Rococo art, architecture, and music are discussed and illustrated.

Credit: 2 semester-hours

MODERN EUROPEAN HISTORY

SOCIAL STUDIES 414. *Modern England*

This course deals both with the historical periods as such and with the influences of the political, economic, and social forces in the English literature of the century. The Napoleonic era, political reform, factory reform, the humanitarian movement, the Irish question, the ministries of Gladstone and Disraeli, and the interpretation of politics and literature are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 420. *European Outlook*

This course is designed to provide the background for understanding Europe today. The reality of ideological struggles between free and totalitarian countries is emphasized as a main source of present-day conflict.

Credit: 4 semester-hours

SOCIAL STUDIES 441. *Economic History of Europe*

The study of Europe from an economic point of view is particularly important in the light of present European problems and their relation to world-wide conditions. This course is a survey of the economic life and development of Europe from the emergence of the ancient civilizations to the beginning of the modern economic world.

Credit: 2 semester-hours

SOCIAL STUDIES 448. *The British Dominions*

This course deals with the role Canada, Australia, New Zealand, and South Africa are playing in present world affairs. Special emphasis is given to Canada and its dual position as an American state and a part of the British Empire.

Credit: 2 semester-hours

SOCIAL STUDIES 457. *Development of Russia*

Factors which have shaped the evolution of the Russian people, such as Byzantinism and the Greek Orthodox faith, the Synod, Tartar state organization, the Mir, Westernization from Peter to Lenin, Slavophilism, and dialectic materialism, are emphasized.

Credit: 2 semester-hours

SOCIAL STUDIES 458. *Russia as a World Power*

An analysis of Russia's relations with China, Iran, Turkey, the European continent, England and the United States is presented. Marxist world policy, as interpreted by Kautsky, Plekhanov, Jaures, Bukharin, Trotsky, Lenin, and Stalin, is described.

Credit: 2 semester-hours

SOCIAL STUDIES 493. *Western Europe Since World War I*

This course presents an outline of the rise of communism and fascism and the reaction of the western democracies to these movements. The Civil War in Spain, the Munich Pact, the failure of the League of Nations, diplomatic events of the World War II era, United Nations problems, the North Atlantic Pact, and special problems of western defense are emphasized. An evaluation of western Europe's significance for the United States is attempted.

Credit: 2 semester-hours

UNITED STATES HISTORY

SOCIAL STUDIES 413. *Economic History of the United States*

The great trends and movements in agriculture, finance, commerce, manufacturing, transportation, and industrial relations are traced from their beginnings in the colonial period to their contemporary expressions in the present crisis.

Credit: 2 semester-hours

SOCIAL STUDIES 419. *American Political Biography*

This is the study of the life and influence of the leading figures in American political and social history. It is the aim here to show the relation of each of these characters to the times in which he lived and to point out how he influenced the trend of American life. The study includes such leaders as Washington, Jefferson, Hamilton, Webster, Lincoln, Cleveland, T. Roosevelt, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 438. *The Literature of American History*

A brief description of the material available for the study of American history is followed by class practice in finding and using the primary sources of some of the facts commonly taught in schools.

Credit: 2 semester-hours

SOCIAL STUDIES 447. *Diplomatic History of the United States*

The purpose of this course is to show how we have become gradually conscious of our world interests and responsibilities, and the important role we have come to play in international politics.

Credit: 2 semester-hours

SOCIAL STUDIES 471. *The United States Since World War I*

This course surveys the major problems, economic, social, political, and international, which have marked our national development since the end of the first World War. It is intended especially for social studies seniors as a preparation for the second year of secondary school American history as provided for in the recently adopted state requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 474. *America in Transition*

This course surveys rapidly the results of the Civil War and then emphasizes the major trends, economic and social, which have made modern America. It is intended as a more advanced study than that which is made in the undergraduate course. The period covered is from 1867 to around 1914.

Credit: 2 semester-hours

SOCIAL STUDIES 475. *The History of American Thought*

This course considers the influential thinking in America from the Mayflower Compact to the Marshall Plan to see how certain ideas or trends of thought have grown out of situations and have in turn helped to mould the course of our history. The student should gain an appreciation for the American contribution to world culture, and an examination is made of outworn stereotypes which exist today. The writings and discourses of important American thinkers are considered including Mather, Paine, Jefferson, Emerson, Thoreau, and Veblen.

Credit: 2 semester-hours

SOCIAL STUDIES 480. *Social History of the United States*

This course presents a study of the social and cultural aspects of American history. As such, it supplements but does not take the place of economic and political history. The course considers population movements and growth, rural and urban social problems, status of women, family life, utopian ventures, mass media of communication, amusements and recreation, and human rights.

Credit: 2 semester-hours

THE AMERICAS

SOCIAL STUDIES 415. *Latin-American Relations of the United States*

This course aims to provide the information necessary to a clear understanding and accurate appreciation of the political, economic, and social relations that have developed between us and our Latin-American neighbors.

Credit: 2 semester-hours

SOCIAL STUDIES 417. *American Archaeology*

This course shows that the New World of the early discoverers was in reality far from new. The course discusses the prehistoric pueblo dwellers and early mound builders. The truly remarkable civilizations of the Mayas and the Incas are examined and compared with that of the Aztecs. North American tribes of Indians are also studied in order to evaluate their significant cultures.

Credit: 2 semester-hours

*SOCIAL STUDIES 435A. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part I*

This course deals specifically with the relations of the United States and the Caribbean countries. Attention is given to the dependencies of the United States in this region as well as to the independent republics. Twentieth century political, economic, and cultural developments of this region are stressed in light of the inter-American system.

Credit: 2 semester-hours

*SOCIAL STUDIES 435B. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part II*

This course deals specifically with the twentieth century political, economic, and cultural life of the South American nations. The role which the South American states play in world affairs is stressed. Attention is given to post-World War II developments and adjustments in South America.

Credit: 2 semester-hours

*SOCIAL STUDIES 440A and 440B. *The Development of Central and South America as Colonies and Nations*

The first part of this course surveys the period of exploration and settlement in the colonies of South and Central America. The second

* Note: Courses 435A, 435B, 440A, and 440B are independent courses; none is prerequisite for another.

part studies the experiences of the various Latin-American nations under different forms of government.

Credit: 2 semester-hours each

SOCIAL STUDIES 453A. *The Development of Mexico and the Caribbean States*

It is intended to show in this course the historical development of Mexico and the Caribbean nations in terms of their political, cultural, social, and economic progress in order to develop understandings and appreciations for their cultures and present-day problems. The relationships of their problems to those of the other American nations are stressed and placed in proper perspective.

Credit: 2 semester-hours

SOCIAL STUDIES 453B. *The Development of Canada*

This course is devoted to the study of the historical background, geographical environment, governmental organization, economic behavior, and social conditions of the northern neighbor of the United States. Its professional objective is to provide the understanding and appreciation necessary to the student and teacher who may follow and interpret the growth, internal and external, of the Dominion of Canada and of its relation to the United States as well as to the British Commonwealth of Nations.

Credit: 2 semester-hours

INTERNATIONAL AFFAIRS

SOCIAL STUDIES 412. *International Government*

The attempts of the international community of states to express itself in a formal world organization are the subject of this course. The agencies which have been established to deal with international legislative, executive, administrative, and judicial problems are studied.

Credit: 3 semester-hours

SOCIAL STUDIES 434. *Contemporary World Affairs*

This course is devoted to a survey of the leading diplomatic, economic, political, and military issues before the world today. The backgrounds from which these international affairs have evolved are reviewed.

Credit: 2 semester-hours

SOCIAL STUDIES 442. *The Far East*

A study is made of the economic, social and cultural situation of the Far East, with particular emphasis on the historical background of China and Japan, and on our relations with the Philippines.

Credit: 2 semester-hours

SOCIAL STUDIES 451. *The Middle East*

This course is a survey of Indian and Moslem civilizations. Post-war planning for the region from the Near East through Persia, India, Burma, Thailand, and Malaya to the Netherland East Indies is discussed.

Credit: 2 semester-hours

ECONOMICS

SOCIAL STUDIES 446. *Current Problems in Economics and Government*

This course is designed to analyze the relationship of economics to government. The causes and results of governmental activities are discussed in the light of their economic significance and their bearing on public welfare.

Credit: 2 semester-hours

SOCIAL STUDIES 450. *Modern Economic Problems*

After a brief recapitulation of the material contained in SOCIAL STUDIES 200A, *Contemporary Economic Life*, the class proceeds to make a detailed study of our broader economic problems and of the public policy relating to them. (Students who have had credit for SOCIAL STUDIES 450B should not enroll in this course.)

Credit: 2 semester-hours

SOCIAL STUDIES 454. *Post-War Economic Reconstruction*

The purpose of this course is to provide information necessary to appreciate the impact of reconstruction following the war upon existing economic institutions.

Credit: 2 semester-hours

SOCIAL STUDIES 456. *International Economic Relations*

The purpose of this course is to study the significance of international trade and exchange to the economic life of our nation and to the world economy.

Credit: 2 semester-hours

SOCIOLOGY

SOCIAL STUDIES 428. *Racial Contributions to American Life*

This course deals with the basic problems of quantity, quality, and distribution of population and emphasizes the adjustments and maladjustments which result from the interrelations of Negroes, Asiatics, and various types of Europeans in the United States.

Credit: 2 semester-hours

SOCIAL STUDIES 429. *Present-Day Social Problems*

Beginning with a survey of levels of living in the United States and their relation to the distribution of wealth and income, this course proceeds with a study of poverty and crime, their sources, treatment, and prevention.

Credit: 2 semester-hours

SOCIAL STUDIES 439. *The Family and Its Problems*

This course gives a history of the family, our American family patterns, the effects of social change, marital patterns of interaction, social roles, sources of conflicts and frustration, divorce and desertion, special problems in family life, economics of children and the home, social legislation pertaining to family problems, marital adjustments, personality change after marriage, parent-child relationships, and personality reorientation.

Credit: 2 semester-hours

SOCIAL STUDIES 443. *Youth and the Community*

This course is a sociological study of youth in its many relations to the community. Special attention is given to problems which arise in the relationship of youth and the community; e. g., juvenile delinquency, conditions contributing to maladjustment, poorly adjusted children, and educational and social agencies active in solving youth behavior.

Credit: 2 semester-hours

SOCIAL STUDIES 444. *The Social Bases of Human Relations*

This course emphasizes the social bases of human nature and personality. Primary and secondary groups, folkways, mores, and institutions are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 455. *Social Legislation*

This course analyzes the social, economic, and political adjustments which have come about in our society due to technological progress.

Credit: 2 semester-hours

SOCIAL STUDIES 476. *Personality Development and Group Relations*

A study is made of personality growth through social contacts, the environmental factors found in the home and family, neighborhood, play, and school groups. Methods of measuring the place of the individual in the group, analysis of the group process, ways of bringing about better life adjustment, and integrating experiences are the subject matter of the course. Concrete cases of maladjustment to society and disintegrated personality are studied. Agencies in the community which serve youth are visited, and leadership in community group activities is recognized as part of the course requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 477. *Rural Sociology*

During this course the student comes face to face with rural life in northern New Jersey. Social processes and problems are considered. Opportunities are provided for students to attend Grange meetings, county fairs, rural dances and parties, and to live for a day or two with a farm family.

Credit: 2 semester-hours

SOCIAL STUDIES 479. *Education and Intercultural Relationships*

Within our nation as within the world, along with common needs and interests, there exist differences between groups and individuals which act as barriers to satisfying human relationships. This course is devoted to a consideration of these barriers and of common interests and needs which exist in spite of such barriers. We study not only the existence of such conditions but also the attitudes, principles, and techniques which may make for better human relationships.

Credit: 2 semester-hours

POLITICAL SCIENCE

SOCIAL STUDIES 402A and 402B. *American and Comparative Government*

The basic facts and principles necessary for the teaching of civics, history, and the political aspects of Problems of American Democracy are studied. The first part is devoted to American national government, including the obligations and rights of citizens, the suffrage, political parties, the changing nature of the Federal system, and the executive, administrative, legislative, and judicial systems. The second part deals with similar political phenomena in England, France, Germany, Italy, and Russia.

Credit: 2 semester-hours each

SOCIAL STUDIES 407. *New Jersey State and Local Government*

A study is made of the State Constitution; New Jersey's place in the Federal system; the rights and duties of citizens; suffrage; political parties; the legislative, the executive, and administrative systems; the courts, the law enforcement and correctional systems; revenues and expenditures; public health, educational, highway, and other services; county and municipal government; and other local political units.

Credit: 2 semester-hours

SOCIAL STUDIES 433. *American Political Thought*

This course deals with contemporary trends and theories as they have emerged from social and economic conditions and as they are founded upon the bases laid down by such men as Hamilton, Madison, Washington, Jefferson, Marshall, Calhoun, Webster, Lincoln, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 437. *The Political Party System in the United States*

Among the topics discussed are: party organizations, the political boss, the political machine, party finances, the process of voting, election laws, primaries, conventions, platforms, presidential elections, majority rule, the development of the party system, sectional politics, the farm vote, the labor vote, and the future of party government in the United States.

Credit: 2 semester-hours

PHILOSOPHY

SOCIAL STUDIES 404. *The Philosophy of History*

It is the purpose of this course to investigate the relation of history to the other social studies and also the major attempts to find the meaning of history. A brief survey is made of the leading philosophies of history.

Credit: 2 semester-hours

SOCIAL STUDIES 470. *History and Principles of Philosophy*

This course presents a study of the history of philosophy and of the important principles contributed by outstanding philosophers from Thales to Gentile. Much of the discussion is centered on the three types of philosophic thought: naturalism, idealism, and pragmatism. Among the philosophers considered are: Plato, Aristotle, Bacon, Spencer, Rousseau, Hegel, James, Dewey, and Gentile.

Credit: 2 semester-hours

SOCIAL STUDIES 478. *Theories of Social Justice from Antiquity to Our Time*

This course is designed to show how specific ideas of social justice resulted from specific historical conditions and events. A comparison of social upheavals among the ancient Hebrews, Greeks, and Romans; the early Christians; the peasants in the Middle Ages; the religious rebels of the early Renaissance; and the revolutionaries of the modern age is to furnish background material for an understanding of present social thought. Lectures and discussions cover the social prophets of the Hebrews; Lycurgus; Cleomenes; Plato; Gracchus; Spartacus; the Essenes, the Waldensians, the Albigensians, and the Hussites; Wycliffe; John Ball; and on selected social thinkers of the last few centuries, such as Hobbes, Locke, Hume, Rousseau, the Utopians, the Socialists, and the Anarchists.

Credit: 2 semester-hours

EDUCATIONAL TECHNIQUES

SOCIAL STUDIES 401. *The Teaching of the Social Studies in Secondary Schools*

This course aims to present recent tendencies in educational method in teaching the social studies. A program is presented containing the correlation of subject-matter organization in socialized recitation, the

teaching of current events, projects in citizenship, and the use of the project-problem as a method of teaching history and civics.

Credit: 3 semester-hours

SOCIAL STUDIES 472. *Modern Social Studies Instruction and Supervision*

This course is designed primarily to assist teachers and supervisors to obtain a comprehensive view of recent curriculum trends, current subject-matter tendencies, and newer practices in secondary school social studies. Topics discussed include: materials, methods, and techniques; use of audio-visual aids; courses of study and experimental problems; professional literature; and problems of the critic teacher and the supervisor.

Credit: 2 semester-hours

FIELD STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 459. *New Jersey and the Metropolitan Community*

This is a sequel to SOCIAL STUDIES 302 and consists of an entirely different series of field studies. There are eight all-day field trips and seven two-hour class periods. The course is given on Saturdays, during both semesters when possible, and is open to all regular and part-time students as an elective. The field studies in the course cover comprehensively the geography of New Jersey and the lower Hudson valley with emphasis on the conservation of natural resources. Attention is also given to the cultural pattern of the region.

Credit: 3 semester-hours

SOCIAL STUDIES 460. *Central Eastern Region*

This fifteen-day tour of Pennsylvania, Maryland, Virginia, West Virginia, North Carolina, and Tennessee covers the major points of historic interest associated with the Colonial Period, the American Revolution, and the Civil War, and the geographic features of the coastal plain, the Piedmont, the Great Valley, and the Appalachian Mountains in these states. Travel is by modern chartered motor coach, and overnight stops are made at first-class hotels. Among the places visited are: Valley Forge, Philadelphia, Baltimore, Annapolis, Washington, Arlington, Alexandria, Mt. Vernon, Fredericksburg, Richmond, Washington's birthplace at Wakefield, Lee's plantation at Stratford, Yorktown, Williamsburg, Jamestown, Raleigh, Chattanooga, Asheville, Great Smoky Mountains, Norris Dam, Jefferson's Monticello at Charlottesville, Natural Bridge, Sky-

line Drive in the Shenandoah National Park, Luray Caverns, Winchester, Harper's Ferry, Frederick, Gettysburg, and the Pennsylvania Dutch area around Lancaster and Ephrata.

Credit: 3 semester-hours

SOCIAL STUDIES 461. *New England and French Canada*

This field study course gives an opportunity to study by direct observation the historical and geographical features of New England and the Province of Quebec. The trip, occupying the twelve days immediately following the summer session, is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers the lower Connecticut Valley, including Hartford, Springfield, Northampton, and Deerfield; the Rhode Island cities of Providence and Newport; historic Massachusetts towns such as Plymouth, Boston, Lexington, Concord, Salem, and Marblehead; the coast of New Hampshire and southern Maine; the White Mountains in the Mt. Washington and Franconia Notch area; the Canadian Province of Quebec, including the ancient French city of Quebec, Montmorency Falls, St. Anne de Beaupré, Montreal; the western shores of Lake Champlain, Lake George, and the Hudson River. It is an indispensable background for an understanding of Colonial and Revolutionary life and history in this region.

Credit: 3 semester-hours

SOCIAL STUDIES 462. *Continental United States*

This field study course consists of sixty-two days of directed travel, including all of July and August, and provides an opportunity for gaining an integrated view of our country as a whole. The trip is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers about 12,500 miles and visits 26 states and 6 National Parks. Among the major points of interest are Gettysburg, Natural Bridge, Blue Ridge and blue grass region, Mammoth Cave, Lincoln shrines in Kentucky and Illinois, Dodge City, Royal Gorge, Pikes Peak, Denver, Rocky Mountain National Park, Taos and other Indian Reservations, Santa Fe, Petrified Forest, Painted Desert, Grand Canyon, Bryce and Zion National Parks, Hoover Dam, Los Angeles, Hollywood, San Diego, San Capistrano and other Missions, Tia Juana, Santa Barbara, Sequoia and Yosemite National Parks, Monterey, San Francisco, Sacramento, Lake Tahoe, Reno, Donner Pass, mammoth redwood groves, Crater Lake, Columbia River Valley, Portland, Seattle, Mt. Rainier, Grand Coulee Dam, Spokane, Butte, Yellowstone National Park, Salt Lake City, pioneer trails of Wyoming, Black Hills, Chicago, Detroit, Toronto and Ni-

agara Falls. All important geographic and historical features are studied under the instruction of members of the college faculty and local specialists. Write for detailed descriptive folder.

Credit: 10 semester-hours

SOCIAL STUDIES 463. *The Lower South*

This is a fifteen-day field study course, covering the gulf coasts of Louisiana, Mississippi, and Alabama, and both coasts of Florida. Among the topics to be observed and studied are the Acadian and Creole culture in and around New Orleans; the industrial, historical, and recreational features of Biloxi, Mobile, and Tallahassee; the tobacco, citrus, and sponge-fishing industries in the neighborhood of Tampa, St. Petersburg, Lake Wales, Sarasota, and Fort Myers; the plant and animal life of the Everglades along the Tamiami Trail; the millionaire playgrounds of Miami and Palm Beach; and the historical shrines of America's oldest city, St. Augustine. It is usually offered during the Christmas holidays.

Credit: 3 semester-hours

SOCIAL STUDIES 464. *Southeastern Region and Gulf Coast*

This is a twelve-day field study course covering the Atlantic Coast from Baltimore to Savannah and the Gulf Coast from Tallahassee to New Orleans. It surveys the economic, geographic, and historical aspects of the coastal plain, the piedmont, and the lower Mississippi Valley visiting, among other places, Richmond, Williamsburg, Charleston, Savannah, Tallahassee, Pensacola, Mobile, Biloxi, New Orleans, Baton Rouge, Natchez, Vicksburg, Jackson, Birmingham, Atlanta, Greenville, Charlotte, and Greensboro. It is offered during the Christmas holidays.

Credit: 3 semester-hours

SOCIAL STUDIES 492A and B. *Studies in American Life—The East and the West*

These courses comprise a unit designed to give the student an integrated understanding of the United States as a cultural, historic, geographic, social and political unit and, at the same time, an appreciation of the regional differences which characterize American unity in diversity. It should be useful to those who have traveled, to those who intend to travel, and to those who, although they cannot travel, wish to broaden their knowledge of our country. The geography, the history, the literature, the art, the music, the architecture, the people, the manners and customs, the flora and fauna, the economic, social, and political problems, and the significant personalities of the regions studied are discussed and illustrated with slides,

films, and other audio-visual materials. Either course may be taken without the other.

The subject matter of SOCIAL STUDIES 492A covers New England, the Central East, the South, and the Middle West east of the Mississippi River. The subject matter of SOCIAL STUDIES 492B deals with the regions west of the Mississippi, i. e., the Great Plains, the Mountain States, the Southwest, the Northwest, and California.

Credit: 2 semester-hours each

INSTITUTES AND WORKSHOPS

SOCIAL STUDIES 490. *United Nations Institute*

This course covers four and one-half hours per day for ten consecutive days excluding Sunday. It consists of basic lectures on factual backgrounds by the instructor, supplementary lectures by visiting lecturers from the United Nations and other organizations, discussions, workshop and library projects, demonstrations of the use of audio-visual materials, and field trips to the United Nations. Included among the subjects studied are the national state system, war and peace, world organizations (past, present, and proposed), the national armaments problem, international law, the international police proposal, pacific methods of settling international disputes, and the outlook for international co-operation.

Credit: 3 semester-hours

SOCIAL STUDIES 491. *Workshop in Citizenship Education*

In this course an attempt is made to study what has been done in some of the many projects in citizenship education throughout the country placing special emphasis on the plans and materials developed by the Citizenship Education Project conducted by Teachers College, Columbia University. Consultants are employed in presenting many points of view, and attention is given to programs and practices already in use in the schools. New means for citizenship education are sought; methods of evaluation are reviewed; and experience is given in the group processes essential to democratic action.

Credit: 2 semester-hours

SOCIAL STUDIES 499. *China Workshop*

A number of authorities introduce first-year students to the rise, growth, and maturing of Chinese civilization, as well as to the fundamental problems of China today, including the conflict of ideologies. The course is given in twelve days. Each day there are two hours of lectures in the morning; after lunch a period of forty-five minutes

is devoted to informal talks including further discussion on Chinese music, philosophy, Chinese school days, festivals, and calligraphy. Some time is also given to the singing of Chinese songs and the showing of motion pictures. During the two-hour workshop period the students prepare their projects, teaching units, and background material under the direction of faculty members.

Credit: 3 semester-hours

SOCIAL STUDIES 496A. *The Chinese Society*

This course is an intensive study of the formation of the Chinese people, their collective life, and the interaction of natural and human forces with the resultant social organizations from early times to the present. Particular emphasis is placed upon the development of social institutions, including the family, labor guilds, educational systems, and religious institutions, as well as their transformation and modernization under the impact of different forces from the West. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *China Workshop*

Credit: 3 semester-hours

SOCIAL STUDIES 496B. *China: The Evolution of a Nation*

This course is an intensive study of the Chinese civilization, the forces underlying the development of the national character of the Chinese people, their contacts and conflicts with other peoples and cultures from historical times to the present. Chinese folklore, folkways, biographies, and contributions to world civilization are considered. Because of its voluminous material, this course does not attempt to cover the whole span of Chinese history, but it is an integrated presentation of the maturing of the Chinese people as a nation. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *China Workshop*

Credit: 3 semester-hours

SOCIAL STUDIES 497. *Chinese Philosophy*

This course shows how the ancient philosophies, Confucianism, Taoism, Buddhism, Mohism, can be applied to the China of today and how they affect modern Chinese thought. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *China Workshop*, or an equivalent course in philosophy.

Credit: 3 semester-hours

SOCIAL STUDIES 498. *China and the Far East*

This course is given in twelve days, two hours each morning being devoted to the discussion of contemporary Chinese problems and China's relations to her neighbors in the Far East; Japan, India, Korea, the Philippines, and Russia-in-Asia.

Credit: 3 semester-hours

ART 414. *History of Chinese Art*

For a description of this course, see page 102.

Credit: 3 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

For a description of this course, see page 37.

Credit: 3 semester-hours

OTHER COURSES THAT MAY BE USED AS ELECTIVES

For more complete descriptions see the undergraduate catalog.

ART 405. *Art in the Metropolitan Community*

This course gives to teachers in the various subject-matter fields an appreciation of the art resources of the major museums in Montclair, Newark, and New York; of art dealers' exhibitions in New York, and of industrial art products.

Credit: 2 semester-hours

ART 406. *Creative Arts Workshop*

This course offers experience in painting, drawing, sculpture, ceramics, and print making for students who wish to employ the creative visual arts in the teaching of other subjects. No previous art training is required.

Credit: 2 semester-hours

ART 408. *Creative Painting*

This course gives the student an opportunity to use the materials of the painter for personal creative experience. Oils, water colors, and poster paints are used. The student is encouraged to work in landscape, figure, and free imaginative composition. No previous art experience is necessary.

Credit: 2 semester-hours

ART 412. *Pageant of Spanish-American Art*

In this course art is treated as a cultural document. Illustrated lectures aim at an appreciation of the cultures of Spanish-America through contact with their rich artistic past and present.

Credit: 2 semester-hours

ART 413. *Art in American Life*

A survey is made of activity in the design arts from the early Colonial period to the present in relation to the course of development of the American community.

Credit: 2 semester-hours

ART 414. *History of Chinese Art*

In this course the developments and distinguishing characteristics of the major arts of China are traced by specialists and are surveyed

from the point of view of their historical developments. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon. During the afternoon workshop period the technique of Chinese painting is demonstrated and taught by the noted Chinese artist, Professor Ya Chin Wang, whose paintings have been exhibited in the Metropolitan Museum of New York and other art centers in this country. No prerequisites are required.

Credit: 3 semester-hours

GEOGRAPHY 503. *Economic Geography of the United States and Canada*

A study is made of the agricultural, industrial, and commercial development of the United States and of the geographic factors that have contributed to that development.

Credit: 2 semester-hours

GEOGRAPHY 504. *Economic Geography of Europe*

This course constitutes a study of the economic development of the nations of Europe in relation to the environmental background and resources that have made Europe one of the world's leading continents.

Credit: 2 semester-hours

GEOGRAPHY 505. *Principles of Anthropogeography*

This course provides a survey of man's occupancy of the earth to determine the part that geographic environment has played in shaping the economic, social, and political developments of people.

Credit: 2 semester-hours

GEOGRAPHY 508. *Physiography of North America*

This is a study of the evolution of land forms in the large physiographic provinces of North America and their influence upon life activities.

Credit: 2 semester-hours

GEOGRAPHY 509. *Economic Geography of Asia*

This course constitutes a treatment of the economic and commercial development of the countries of Asia in relation to their natural environment.

Credit: 2 semester-hours

GEOGRAPHY 405A and 405B. *Climates of the World*

This course embraces an explanatory comparison of the major types of climatic environment found in different parts of the world, and the factors controlling their distribution. Special attention is given to graphing, mapping, and the interpretation of climatic data.

Credit: 2 semester-hours each

GEOGRAPHY 406. *Geology*

This course deals with the earth and its geographic, stratigraphic, and structural development throughout geologic time; the record of the evolution of life as interpreted through a study of rocks and fossils.

Credit: 2 semester-hours

GEOGRAPHY 408A and 408B. *Political Geography*

This course deals with the geographic conditions influencing the significant changes in the political divisions of the world. Emphasis is placed on geographic factors influencing racial, religious, commercial, and political adjustments between nations.

Credit: 2 semester-hours each

GEOGRAPHY 409. *Economic Geography of the British Isles*

A comprehensive treatment of the resources of the British Isles is given, and the influence of the natural environment upon the utilization of those resources in the economic, social, and political development of the British Empire is evaluated.

Credit: 2 semester-hours

GEOGRAPHY 410. *Economic Geography of Caribbean America*

This is a study and interpretation of the major and important minor economic areas of Caribbean America in relation to the natural environment.

Credit: 2 semester-hours

GEOGRAPHY 411. *Geographic Influences in American History*

A study is made of the geographic factors influencing the development of social, economic, and political life in America.

Credit: 2 semester-hours

GEOGRAPHY 412. *Geography of Africa, Australia, and New Zealand*

A study is made of the activities of the people of Africa, Australia, and New Zealand in relation to their natural environment. Attention

is given to the influence of geographic factors upon the post-war adjustments and the possible future relations of these countries with the United States.

Credit: 2 semester-hours

GEOGRAPHY 413. *Economic Geography of South America*

This course constitutes a study of the influence of the natural environment upon production and utilization of resources in the economic, social, and political development of the various nations of South America.

Credit: 2 semester-hours

GEOGRAPHY 414A and 414B. *Advanced Economic Geography*

This course is a study of the influence of the physical environment upon the production of, the trade in, and the utilization of the important agricultural, forest, mineral and sea products, and the manufactured commodities of the world.

Credit: 2 semester-hours each

GEOGRAPHY 416. *Conservation of Natural Resources*

This course includes a study of the natural resources of the United States, their past and present exploitation, their influence on the development of the nation, their conservation and future use.

Credit: 2 semester-hours

GEOGRAPHY 417. *Meteorology with Applications to Aviation*

This course constitutes a study of the atmosphere, the sources of atmospheric heat, temperature variations and their relation to weather phenomena. Emphasis is placed on the nature of the large scale wind systems, air masses and fronts, and upon rainfall distribution.

Credit: 2 semester-hours

GEOGRAPHY 418. *Regional Geography of North America*

This course constitutes a detailed regional treatment of the continent of North America. Emphasis is placed upon the human activities of the various regions in relation to their natural environment and the relations of the regions to each other.

Credit: 2 semester-hours

GEOGRAPHY 419. *Economic Geography of the Union of Soviet Socialist Republics*

This course is designed to give a comprehensive and objective treatment of Soviet Russia's natural resources and industrial potential

in relation to the geographic environment. Special emphasis is given to the formative periods of Russia's industry to show the significance of and the continuous operation of geographical factors in the economic development of Russia.

Credit: 2 semester-hours

MUSIC 401. *The Teaching of Music in Secondary Schools*

This course deals with the aims, content, and procedure in the teaching of music in the junior and senior high school.

Credit: 3 semester-hours

MUSIC 405. *Orchestra Conducting and Score Reading*

This course aims to develop skills in orchestra conducting and score reading. It includes a study of the particular type of ear training needed in conducting, the technique of the baton, score reading, and interpretation.

Prerequisite: MUSIC 305

Credit: 2 semester-hours

MUSIC 406. *Modern Music*

This course aims to interpret modern music in terms of the social, political, and cultural life of our times. It includes a study of the music of Debussy, Richard Strauss, Schoenberg, Stravinsky, De Falla, Hindemith, Bartok, Shostakovich, and others. Special attention is given to the relation of modern music to other forms of modern art expression.

Credit: 2 semester-hours

MUSIC 407. *The Development of the Opera*

This course deals with the origin, development, and characteristics of opera in the Italian, French, German, and Russian schools. Class analyses are made of representative operas of these schools. The content of this course is related to the Saturday afternoon broadcasts from the Metropolitan Opera, New York City. Special attention is given to building an ear repertory of operatic music heard over the radio.

Credit: 2 semester-hours

MUSIC 408. *Wagner Music Dramas*

This course deals with the operas and music dramas of Richard Wagner. It includes a study of Wagner's artistic ideals and their application to his compositions.

Credit: 2 semester-hours

MUSIC 409. *Counterpoint*

This course aims to provide a practical treatment of counterpoint for music students. It includes analysis of the works of the sixteenth century masters of vocal polyphony with enough of original work to insure a grasp of the principles involved.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 410. *Composition*

This course aims to develop the creative power of the student in the composition of small vocal and instrumental forms. Special attention is given to the functional aspects of composition in word setting, writing accompaniments, and improvisation.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 413. *Masters of the Symphony*

This course aims to provide the student with an understanding and appreciation of the classic and romantic symphony through the study of the symphonies of Haydn, Mozart, Beethoven, Schubert, Schumann, and Brahms.

Credit: 2 semester-hours

MUSIC 414. *Modern Symphonic Forms*

This includes a study of the post-romantic symphonies of Bruckner, Mahler, Dvorak, Franck, Tchaikowsky, and Sibelius; the symphonic poems of Strauss, Smetana, and Debussy, and the orchestral suites of Rimsky-Korsakoff, Ravel, and Stravinsky.

Credit: 2 semester-hours

MUSIC 417. *American Music*

This course provides a survey of American folk and art music as related to various social, economic, political, and cultural epochs in the history of our country.

Credit: 2 semester-hours

MUSIC 418. *Music of Russia*

This course provides a survey of Russian music from the Czarist regime to the modern Soviet. It aims to interpret Russian music in terms of the social, political, and cultural forces which have shaped it.

Credit: 2 semester-hours

MUSIC 420. *The Art Song*

This course provides a survey of the art song and includes a detailed study of the art songs of Beethoven, Schubert, Schumann, Brahms, Wolf, and Strauss. Special attention is given to the relation of music and poetry.

Credit: 2 semester-hours

MUSIC 424. *A Survey of Wind Instrument Music*

This course includes a survey of music for solos, small ensembles, and full band with emphasis on the literature available for brass and wood wind players in high school. Members of the college band are available as a laboratory group so that the performance of all music under consideration is possible. Special attention is given to the music originally composed for wind instruments. New music of all publishers is available for examination and evaluation. The content of the course is determined in part by the needs of the teachers in the field.

Credit: 2 semester-hours

MUSIC 425. *Music of the Romantic Period*

This course deals with the romantic spirit in music as expressed in the works of Schubert, Schumann, Mendelssohn, Chopin, Berlioz, Liszt, and others. It includes a study of program music, piano and song literature, and the rise of national schools of musical composition. Representative works are studied through performance, recordings, and radio listening. Special attention is given to parallel aspects of Romanticism in literature and the visual arts.

Credit: 2 semester-hours

MUSIC 426. *Survey of Music Literature*

This is a survey course in Music Literature and includes a study of folk song, art song, oratorio, opera, idealized dance forms, instrumental suite, sonata, symphony, and symphonic poem. Abundant use of musical illustration, directed listening, and music making acquaints the student with great masterpieces of music which should be the possession of every generally cultured person. This course is designed for the general student and aims to make intelligent and appreciative consumers of music. It is a non-technical course and attempts to make intelligent and appreciative radio-listeners and concert goers. Special attention is given to the relation of music to English literature and the social studies.

Credit: 2 semester-hours

MUSIC 427. *Audio-Visual Aids in Music Education*

This course deals with the selection, evaluation, coordination, and use of audio-visual aids in the teaching of school music. It includes record materials, radio programs, various types of sound equipment, kodachrome slides, the opaque projector, and films and film strips. This course provides four laboratory periods for demonstration and instruction in the use of equipment.

Credit: 2 semester-hours

MUSIC 428. *Music of Twelve Great Nations*

This course aims to increase understanding among people through a study of the folk and related art music of twelve great nations. At a time of national tensions music crosses boundary lines and tends to unite peoples. Special attention is given to the social, economic, political, and cultural backgrounds of the music of these nations. Because of the social implications of this music this course is recommended particularly to teachers of the social studies. Musical illustrations are given at the piano, through group singing, and through recordings.

Credit: 2 semester-hours

MUSIC 499A. *Workshop in High School Music*

This course deals with special phases of high school music. It is organized on the unit plan and includes music for boys, folk song dramatizations, integration of music with other subjects, music appreciation, visual aids, small vocal and instrumental ensembles, operettas, pageants, and festivals. Students are given opportunity to work out units in fields of special interest.

Prerequisite: MUSIC 401

Credit: 2 semester-hours

MUSIC 499B. *Workshop in School Music*

This course is designed primarily for music teachers-in-service who wish to work out projects for use in their respective schools. The content of this course is determined by needs in the field. It may include folk song dramatizations, small vocal and instrumental ensembles, the integration of music with other subjects in the curriculum, music for boys, visual aids in music pageants, festivals, and materials for special programs. This course provides the teacher with a number of units of work suitable for classroom use.

Credit: 2 semester-hours

HEALTH EDUCATION 401. *Methods and Materials in Health Education*

This course prepares the teacher to assume the responsibility for organizing and conducting a program of health instruction. The coordination of health with other subject-matter fields and the evaluation of textbooks and audio-visual materials are given special consideration.

Credit: 2 semester-hours

HEALTH EDUCATION 407. *Prevention and Care of Athletic Injuries*

This is a lecture and laboratory course designed to acquaint the student with ways to prevent and to care for the common injuries sustained in athletics.

Credit: 2 semester-hours

HEALTH EDUCATION 408. *Driver Education and Training*

Part I

This part consists of a minimum of 20 hours of class recitations and discussions for which home reading and study have been assigned. The following topics are included: (1) history and development of driver education and training programs; (2) objectives of driver education; (3) local, state, and national traffic safety programs; (4) driver qualifications; (5) psycho-physical testing; (6) curriculum content of school courses in driver education and training; (7) construction, operation, and maintenance of automobiles; (8) traffic laws and driver licensing; (9) traffic engineering; (10) pedestrian education and protection; (11) equipment for teaching driver education; (12) liability, costs, and insurance; (13) planning driver education as a part of the daily program of the high school; (14) public relations; (15) records and reports; and (16) visual aids in teaching driver education.

Part II

This part consists of a minimum of 20 hours devoted to the following: (1) behind-the-wheel instruction; (2) demonstrations and student-teacher practice in the car; and (3) road tests in traffic. Home reading and study are required in preparation for these projects.

Prerequisite: License to drive a car

Credit: 2 semester-hours

HEALTH EDUCATION 411. *School Health Services*

The student is familiarized with the health services available in the school. The part which the teacher plays in coordinating his activities with the school medical staff is emphasized.

Credit: 2 semester-hours

HEALTH EDUCATION 412. *Home Hygiene and Care of the Sick*

Principles, methods, and content for teaching home care of the sick and mother and baby care are presented in this course. All lessons are demonstrated. Teaching by students is an essential part of the course. Successful completion of the course qualifies the student as a Red Cross instructor in home care of the sick and mother and baby care for student groups, mothers' groups, and other community groups. Credit for this course may be applied as partial fulfillment for the requirements for the permanent certificate for school nurses. Nurses, teachers, and teachers-in-training may enroll for this course.

Credit: 2 semester-hours

PHYSICAL EDUCATION M and W405. *Organization and Management of Athletics*

The course deals with the organization and management of athletic programs in the secondary schools. Such items as educational values, insurance, leadership, safety, finances, and state and local controls are considered.

Credit: 2 semester-hours

PHYSICAL EDUCATION 407. *Physiology of Exercise*

The effects of big-muscle activities on the human organism are discussed. Topics such as muscular contraction, coordination, fatigue, and exhaustion are studied. Emphasis is placed upon the effects of speed, strength, and endurance exercises on various age and sex groups.

Credit: 2 semester-hours

PHYSICAL EDUCATION 409. *Organization and Administration of Physical Education*

The details of organizing the units of the physical education programs are discussed. Various topics, such as legislation, financing, curriculum construction, grading, excuses, plant facilities, supplies and equipment, and office management are considered.

Credit: 2 semester-hours

PHYSICAL EDUCATION 410. *Water Safety and First Aid*

This course includes intensive instruction in swimming, diving, water sports, boating, canoeing, water safety, and first aid. Students can qualify for Red Cross certificates during this course.

Credit: 2 semester-hours

RECREATION 405. *Practice and Problems in Recreation*

Under supervision the student collects recreational and activity materials suited to his own particular needs. Visits are made to playgrounds, recreational centers, and the student is given an opportunity for practical experience in the planning and direction of recreational activities on the campus.

Credit: 2 semester-hours

COLLEGES FROM WHICH GRADUATE STUDENTS NOW MATRICULATED RECEIVED THEIR BACCALAUREATE DEGREE

A & T College, Greensboro, N. C.	Panzer College
Alfred University	Pennsylvania State College
Barnard College	Pomona College
Bennett College	Pratt Institute
Bloomfield College	Rhode Island State College
Bob Jones University	Rider College
Boston University	Russell Sage College
Bowdoin College	Rutgers University
Brown University	St. John's University
Bucknell University	St. Lawrence University
Catholic University	St. Peter's College
Cedar Crest College	Seton Hall College
Colby College	Springfield College
Colgate University	State Teachers College at Jersey City
College of St. Elizabeth	State Teachers College at Mansfield
College of the City of New York	State Teachers College at Montclair
Columbia College	State Teachers College at Newark
Cooper Union	State Teachers College at Paterson
Cornell University	State Teachers College at Trenton
Dana College of the University of Newark	Swarthmore College
Dartmouth College	Syracuse University
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Drew University	Temple University
Duke University	Tufts College
East Stroudsburg State Teachers College	Tusculum College
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Franklin & Marshall College	University of Florida
Georgetown University	University of Georgia
Georgian Court College	University of Illinois
Goucher College	University of Maine
Grove City College	University of Michigan
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Hampton Institute	University of North Carolina
Holy Cross College	University of Oregon
Hope College	University of Pennsylvania
Howard University	University of Wisconsin
Hunter College	Upsala College
Juniata College	Vassar College
Lafayette College	Washington & Lee University
Limestone College	Washington State College
Mt. Holyoke College	Wellesley College
New Jersey College for Women	Wesleyan University, Connecticut
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Notre Dame University	William and Mary College
Oberlin College	Woman's College of the University of North Carolina
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NEW JERSEY
STATE TEACHERS COLLEGE
AT MONTCLAIR

APPROVED BY

Robert H. Morrison

ROBERT H. MORRISON

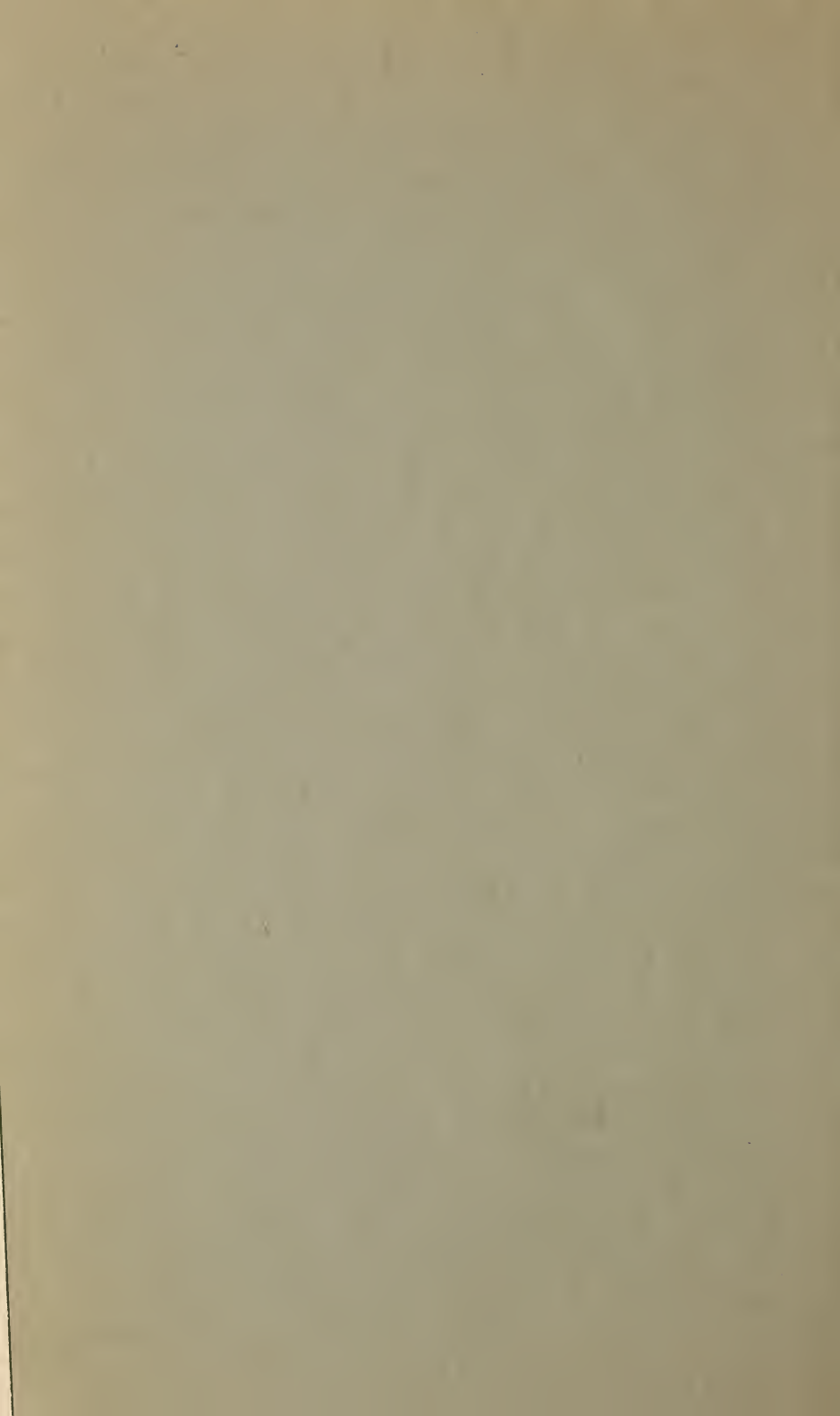
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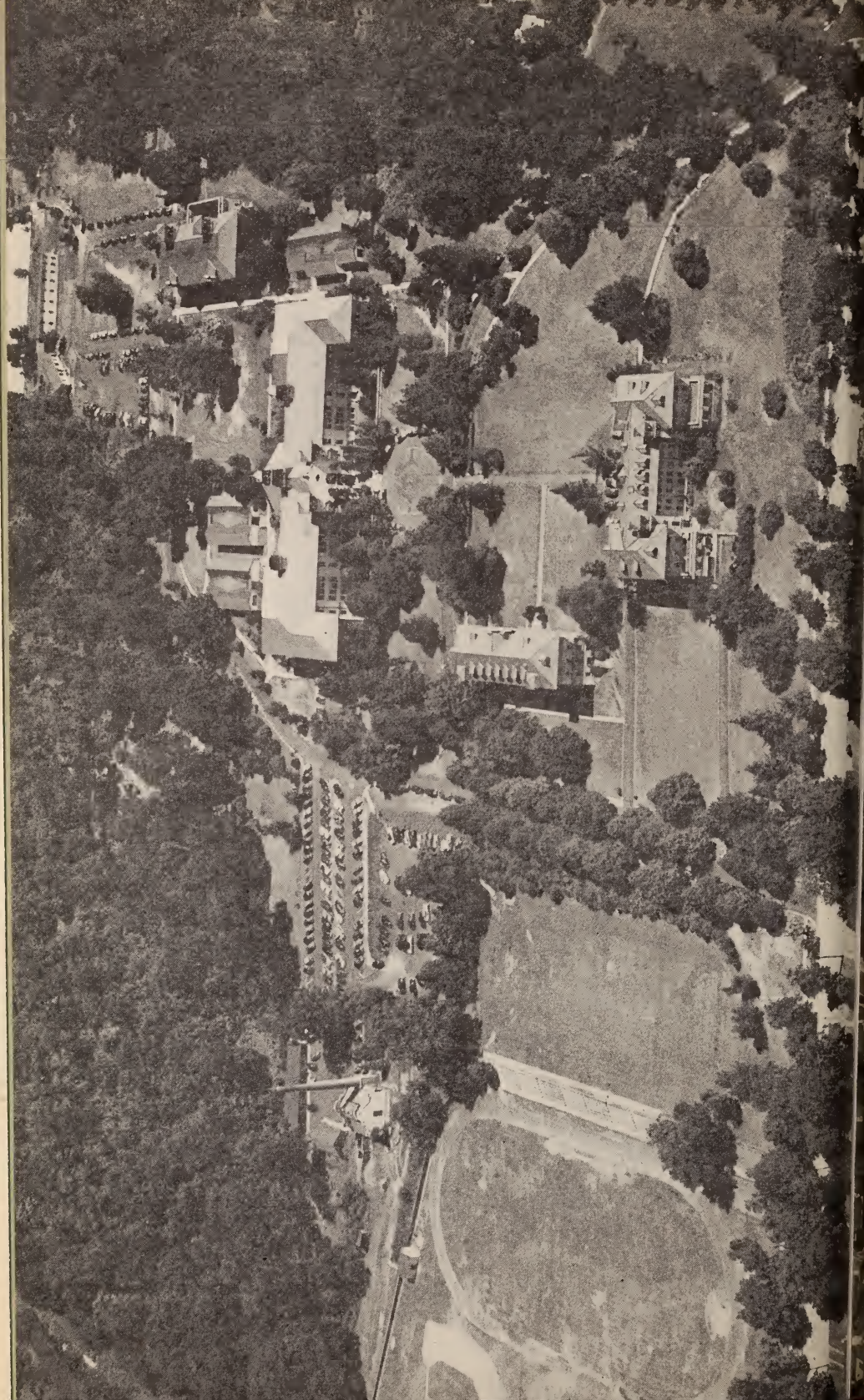
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GRADUATE BULLETIN

1953-1955

UPPER MONTCLAIR, NEW JERSEY





BULLETIN

OF THE

New Jersey State Teachers College at Montclair

GRADUATE DIVISION

NEW JERSEY STATE TEACHERS COLLEGE

Montclair

1953

TABLE OF CONTENTS

	<i>Page</i>
Officers of Administration	5
Graduate Faculty	6
GENERAL INFORMATION	7
History	7
Location	7
Library	7
Living Accommodations	8
Administration	8
Purposes	9
Organization	9
Student Teaching	10
Admission and Matriculation	10
Advanced Credits	11
Student Load	11
Requirements for A. M. Degree	11
Comprehensive Examinations	12
General Restrictions	13
Fees and Service Charges	13
The Master's Thesis and Research	13
Fields of Work	15
DEPARTMENT OF BUSINESS EDUCATION	16
DEPARTMENT OF ENGLISH	25
DEPARTMENT OF FOREIGN LANGUAGES	41
DEPARTMENT OF INTEGRATION	42
DEPARTMENT OF MATHEMATICS	61
DEPARTMENT OF SCIENCE	73
DEPARTMENT OF SOCIAL STUDIES	88
OTHER COURSES THAT MAY BE USED AS	
ELECTIVES	113
Art	113
Geography	114
Music	116
Health Education	121
Physical Education	122
New Jersey State School of Conservation	124
Colleges from Which Graduate Students Now Matriculated	
Received Their Baccalaureate Degrees	126

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*Leave of absence for military service.

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HORACE JONES SHEPPARD
D. HENRYETTA SPERLE
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ELIZABETH S. FAVOR, *Secretary*

GENERAL INFORMATION

HISTORY

In 1908 the Montclair State Teachers College first began its teacher-education program as a two-year Normal School. In 1927, by act of the State Board of Education, it was changed to a State Teachers College with four-year curricula leading to a Bachelor of Arts degree and certification to teach in the secondary schools of the State. That the College might better serve teachers in service, extension courses were instituted in 1929 and summer sessions in 1930. The fact that hundreds of teachers in service registered in these programs annually shows the wisdom of the State Department in instituting them. The majority of these teachers held Bachelor's degrees, and they wished to continue their preparation and receive graduate credit for their work. They, therefore, requested that the College offer courses for graduate credit. To meet this demand, the Commissioner of Education recommended and the State Board of Education voted in June, 1932, that such work be offered and the College be empowered to grant the degree of Master of Arts. Graduate courses were first offered at the State Teachers College at Montclair in the summer of 1932 and have been offered in all regular and summer sessions since. There are now more than six hundred students matriculated in the Graduate Division.

LOCATION

The College is located on the northern edge of Upper Montclair about three miles from Montclair Center. The campus is on the boundary line between Essex and Passaic Counties. Valley Road, the main thoroughfare between Montclair and Paterson, bounds the campus on the east; to the west is the ridge of Watchung Mountain; to the north are Great Notch and Paterson; to the south, Montclair, Newark, and the Oranges.

The College may be reached by the Lackawanna Railroad to Montclair, thence by bus to the campus; by the Erie Railroad to Montclair Heights Station; and by bus from most of the cities in Northeastern New Jersey.

LIBRARY

Conveniently located on the main floor of College Hall is the library of 61,000 volumes with a spacious reading and reference room and two smaller reading rooms housing the music collections and the curriculum laboratory and textbook exhibit. Special collections include the Howe collection of organ music; the Mark Andrews music

library; the Webster Memorial collection of modern poetry, including many first editions and autographed copies; the Finley collection of science textbooks, which has been augmented by early textbooks of historical significance from other sources; the Carnegie Secondary Art set of books and pictures; a collection of New Jerseyana; and a recent outstanding gift, the Roy W. Hatch collection of Lincolniana. Of special interest is the China Institute Library, a permanent loan from the China Institute of New Jersey. The textbook collection of 4,800 volumes includes the most recent textbooks in all subjects on both the elementary and secondary level and curricula from the majority of communities and counties of New Jersey as well as outstanding curricula from other states. The library also maintains a complete file of bulletins of the U. S. Office of Education for which this library is designated as an official depository library in the area. An up-to-date and widely-used file of pamphlets, maps, and pictures, classified by subject, is available to all students.

All of the books, including the reference collection, are on open shelves to which the students, as well as faculty, graduates, and teachers-in-service, have access and borrowing privileges. This open-shelf policy applies even to the periodical collection which consists of back issues of all but the most ephemeral of over 300 currently received periodicals. Bound volumes of magazines total over 2,200.

Supplementing the College library is the library of the College High School which is a large, pleasant room housing 3,800 volumes and located in the College High School. These books are catalogued at the College library and are available through the main catalog as well as through the catalog of the College High School. The High School Librarian works in close cooperation with the four members of the College library staff, particularly in the field of literature for adolescents, in which an extensive and up-to-date collection is maintained.

LIVING ACCOMMODATIONS

During the College year graduate students are accommodated in the dormitories whenever possible. The rate for the Summer Sessions is \$14.50 a week including room, breakfast and dinner. These charges are subject to revision.

ADMINISTRATION

The graduate program of the College is administered with the assistance of two college committees: the Graduate Committee appointed by the President of the College, and the Administrative Council which consists of the President, the Dean of Instruction, the Director of Admissions, the Chairman of the Graduate Committee, the Director of Personnel and Guidance, and the heads of the major departments.

PURPOSES

The New Jersey State Teachers College at Montclair is a professional school devoted primarily to the interests of secondary education. This objective is the controlling factor in the development of the curricula, teaching procedures, extra-curricular activities, and college spirit, and tends to unify all the activities of the college—professional, cultural, and social.

Graduate courses are organized to serve the purposes of two groups of students:

Those who wish to matriculate for the degree of Master of Arts:
Graduates of accredited liberal arts and professional colleges.
Secondary teachers, supervisors, principals, and other school administrators, who are graduates of approved colleges.

Those who do not wish to matriculate for the degree:

Students who hold graduate degrees but who wish to continue their professional preparation.

College graduates who wish to take courses leading toward secondary school certification.

Students who are matriculated for advanced degrees in other colleges and universities and who plan to transfer their credits.

Special students taking courses for cultural purposes without reference to credit.

ORGANIZATION

The work is organized to meet the needs of those who wish to do full-time work and of those who are teaching and who wish to take courses in the late afternoon, evening, or on Saturday morning. The courses in the Part-Time and Extension Division and Summer Sessions are given by members of the college staff and are granted resident credit. It is thus possible for a teacher in service to earn the Master's degree without taking a leave of absence from his teaching position.

To meet the needs of those candidates lacking secondary certification, some of the professional courses required for certification in the State of New Jersey may be taken on the graduate level. Students holding Bachelors' degrees from other colleges are permitted to matriculate for the Master's degree here prior to obtaining certification; but by the time the degree is to be conferred, they must have qualified for a teaching certificate. In all major departments except that of the Department of Integration this must be a secondary teaching certificate. Students who are working for certification should write

to the Secretary of the State Board of Examiners, 175 West State Street, Trenton, New Jersey, submitting a transcript of all their previous college work and ask for an evaluation as to what they are lacking for certification.

Graduate students who must meet certification requirements as well as the requirements for the Master's degree will find it necessary to spend additional time on the campus and in student teaching. Supervised student teaching required for certification, does not carry graduate credit.

STUDENT TEACHING

Graduates of other colleges who wish to do their student teaching through the New Jersey State Teachers College at Montclair should obtain from the Integration Office the mimeographed statement outlining the conditions under which it can be done.

ADMISSION AND MATRICULATION

The applicant for admission must be a graduate of an accredited college or university and must present evidence of his qualifications for advanced study as shown by a high scholastic record, training, and experience. Note that matriculation for the Master's degree must be completed before the candidate has acquired more than eight semester-hours of graduate credit.

Steps in the matriculation process are as follows:

1. The candidate secures from the Graduate Office an application which must be completed and returned to that office.
2. The candidate will have his college send official transcripts of all undergraduate credits (if the applicant is not a graduate of Montclair), to the Chairman of the Graduate Committee. Official transcripts should be on file in the Graduate Office before the time of registration for graduate courses.
3. After the application and transcripts have been received and reviewed in the Graduate Office, the candidate will be invited to confer with the Chairman of the Graduate Committee.
4. The candidate will next confer with the graduate adviser in the department in which he expects to do his work, and the adviser will develop a program of courses with him.
5. The candidate will then have a final brief conference with the Chairman of the Graduate Committee. Following this, the candidate will be advised in writing of the decision of the Graduate Committee and will be furnished with a statement of the work to be completed.

Final action on all applicants is vested in the Administrative Council.

Announcements are made with the offerings of courses each semester as to when the departmental advisers and the Chairman of the Graduate Committee may be consulted.

ADVANCED CREDITS

For graduates of institutions other than the New Jersey State Teachers Colleges, a minimum of thirty-two semester-hours of residence work is required. In the case of graduates of the New Jersey State Teachers Colleges a maximum of eight semester-hours of graduate work from other accredited institutions may be offered toward the Master's degree.

Students who are eligible to transfer from other institutions graduate credits earned prior to matriculation must submit official transcripts of these credits for consideration by the Graduate Committee.

Candidates eligible to take work at other graduate schools and who desire to do so after matriculation must first secure written permission from the head of the department concerned at Montclair and from the Chairman of the Graduate Committee, if the credits so gained are to be applied toward the Master's degree.

Not more than eight semester-hours of graduate credit will be granted for work taken at Montclair prior to matriculation. For this reason, candidates should apply for matriculation before the completion of that amount of work.

STUDENT LOAD

Graduate work should involve careful and intensive study with ample time to explore areas which may warrant further study.

Twelve to sixteen hours of work per semester is considered a full-time program for the graduate student in residence.

For teachers employed full time, six semester-hours of work in any one semester shall be the maximum load with four semester-hours being recommended.

In the regular six-week summer session, the maximum load shall be eight semester-hours. The Graduate Committee strongly recommends that the student consider six semester-hours of work a full program.

REQUIREMENTS FOR A.M. DEGREE

Thirty-two semester-hours of graduate credit are required for the Master of Arts degree.

Each student selects a major field in which he must complete such courses as are prescribed.

Each department except that of Integration requires at least thirty semester-hours of credit in its field as a prerequisite to matriculation.

After matriculation, the Integration Department requires twenty-four semester-hours in its field; all other departments require a minimum of eighteen semester-hours.

For graduates of teachers colleges, at least six semester-hours of the required total must be taken in the Department of Integration. The amount of such work required of graduates of other colleges is determined by the number of courses needed for certification. INTEGRATION 503 is required of all students matriculated in the Graduate Division.

Four of the total credits may be satisfied by a thesis which meets the approval of the Graduate Committee.

A candidate who is matriculated for the A. M. degree after September 1, 1952, must attend as a full-time graduate student one summer session or one regular semester.

COMPREHENSIVE EXAMINATIONS

A comprehensive departmental examination is required in all departments. This examination may be both written and oral. The examination is given by the department in which the student does his major work. No academic credit is given for the examination.

In some departments the thesis may be offered in place of the written comprehensive examination. Usually the oral examination is required in case a thesis or research problem is presented in lieu of the written examination.

An average of "B" or better is required for work submitted for the Master's degree. No credit is given for work below "C."

Certification to teach in New Jersey is a prerequisite to the conferment of the Master's degree at the Montclair State Teachers College. Those matriculated in subject matter areas must be certified to teach the major subject in secondary school. Students matriculated in the Integration Department need either elementary or secondary certification.

Students who desire to meet the State requirement in Supervised Student Teaching must register for that experience with the Assistant in Graduate Personnel.

Work for the degree must be completed within five years of the date of matriculation. Candidates must file with the Registrar an application for conferment of the degree before November 30 of the college year in which the work is to be completed. Application blanks for this purpose may be secured from the Registrar. The burden of responsibility for the request rests with the candidate. This is of special significance to the teacher in service who may have distributed the graduate work over four or five years.

GENERAL RESTRICTIONS

No credit is granted for :

1. Correspondence work.
2. Junior-college courses.
3. Graduate courses with mark below "C."
4. Supervised teaching.
5. More than eight semester-hours of graduate credit prior to matriculation.
6. The comprehensive departmental examination.
7. More than six semester-hours of graduate credit earned in extension (off-campus) courses.
8. Graduate work taken elsewhere unless the student is a graduate of one of the New Jersey State Teachers Colleges, and in such cases not more than eight points.

FEES AND SERVICE CHARGES

Eleven dollars (\$11.00) per semester-hour to residents of New Jersey.

Thirteen dollars (\$13.00) per semester-hour to non-residents of the State of New Jersey.

Service charge, fifty cents (\$.50) per semester-hour.

Supervised Student Teaching (if required), sixty-six dollars (\$66.00).

Dormitory fees including room, breakfast, and dinner for a summer session, fourteen and one-half dollars (\$14.50) a week.

These charges are subject to revision.

All charges are payable during the registration period.

THE MASTER'S THESIS AND RESEARCH

The writing of a Master's thesis is optional. The election to write a thesis should be considered in terms of the subject matter, the opportunities to carry out the research project on a standard acceptable for a thesis, and the needs of the individual in relation to his plan of graduate study.

Some departments have in effect the equivalent of a thesis requirement except for the formal filing of the complete typed thesis following standard style.

Students in the Social Studies Department complete either a Master's thesis or a Master's essay on a problem which each individual chooses for specialization. The student is then given an oral examination on the paper before a seminar of members of the Social Studies Department.

An extensive term paper resulting from an individual research project is completed by every student in the course, INTEGRATION 603, *Principles and Practices of Research*. Students who plan to write a thesis are encouraged to take this course prior to the work for the thesis.

Other departments have research courses which follow the basic course, INTEGRATION 503, *Methods and Instruments of Research*, and which are designed to give the student a good foundation for thesis work. These special departmental provisions are outlined in each departmental statement of requirements.

Students writing a thesis must register with the Chairman of the Graduate Committee for the course, GRADUATE 500, *Master's Thesis*, for four semester-hours.

The following information is of aid to students submitting Master's theses:

- a. Choice of Topic and Plan of Research.
The topic and plan of research will be worked out in consultation with the head of the student's major department. A sponsor will be appointed by the head of the department.
- b. Presentation of Plan.
The plan for the thesis and its research must meet the approval of the sponsor, the head of the department concerned, the Graduate Committee, and the Dean of Instruction.
- c. Mechanics of the Thesis.
Each thesis student should be guided by the "Style Sheet for Theses" which may be obtained in the Graduate Office.
- d. Submitting the Thesis.
A typewritten copy of the thesis must be submitted to the sponsor who, if he approves of it, will submit the thesis to a reading committee. This should be done not later than six weeks prior to the date of graduation. Any changes recommended by the reading committee must be made by the candidate. Three typewritten copies of the thesis, as finally approved, must be presented by the candidate to the head of his major department at least two weeks before the date of graduation. Final acceptance rests with the Administrative Council.

- e. An acceptable thesis shall show evidence that:
1. The candidate has comprehended the essentials of his problem, followed a well-organized plan of work, and offered satisfactory solutions.
 2. The candidate has made an independent and intensive study of his problem.
 3. The candidate has made a comprehensive study of the literature of his subject.
 4. The candidate's conclusions are justified by his findings.
 5. The candidate has a practical working knowledge of research methods.
 6. The thesis is not a duplicate of a similar study.
 7. The data involves a sufficient fund of information to make the findings significant.
 8. The thesis is of definite value to the teaching profession.

FIELDS OF WORK

Majors in graduate work are offered in the fields of Administration and Supervision, Biology, Business Education, English, Mathematics, Personnel and Guidance, Physical Science, Science, and Social Studies. In each curriculum there is a core of educational courses and major subject-matter courses. The amount of each type depends on the candidate's undergraduate work and is determined by the student's graduate committee. The work in Administration and Supervision and in Personnel and Guidance is limited largely to professional courses in order to meet the State certification requirements.

Students choosing a major field of study at the graduate level should keep in mind that certain experience requirements are needed in the fields of Administration and Supervision and Personnel and Guidance. Enrollment in certain Integration courses is limited to those who are having or who have had actual teaching experience. For details see page 42.

DEPARTMENT OF BUSINESS EDUCATION

The graduate work in the Department of Business Education is designed to prepare teachers of business education for administrative, supervisory, specialized work or master teaching in the field of business education. In order to attain these objectives the candidate has an opportunity to supplement his undergraduate program and to explore advanced areas of work, this work to be determined in accordance with the individual background, experience, and achievement of the candidate.

Graduate work toward the Master of Arts degree in Business Education presupposes the completion of an undergraduate major in business education, or its equivalent. The undergraduate major is based on the requirements as established by the New Jersey State Board of Education. For further details see the undergraduate bulletin.

In lieu of four of the thirty-two semester-hours of credit required for the Master of Arts degree, the candidate may write a thesis giving the results of some study in the field of business education or its teaching. This study may be made only after consultation with the Head of the Business Education Department. The study is completed under the sponsorship of a member of the Business Education Department faculty. Plans should be made to have such a study in its final form and approved by the Department of Business Education by May 1st of the year in which the degree is expected to be conferred. The thesis may be substituted only for courses listed under Division III as described under the course requirements.

All candidates for the Master of Arts degree in Business Education must pass a comprehensive examination before they are granted the degree. This examination is given the first Saturday in April and the last Saturday in July for those candidates anticipating graduation. It is general in nature and is intended to test the candidate's maturity of thought with respect to business education and the teaching of business education.

COURSE REQUIREMENTS

The basic plan of the program is made up of four divisions with graduate courses bearing 500 or 600 numbers and senior-graduate courses bearing 400 numbers.

Division I. Required Professionalized Business Education Courses (6 sem. hrs.)

B. E. 502.	Principles and Problems of Business Education	2 s. h.
B. E. 503.	Administration and Supervision of Business Education	2 s. h.
B. E. 504.	Improvement of Instruction in Business Education	2 s. h.

Division II. Required Seminar in Economics (6 sem. hrs.)

B. E. 602.	Seminar in Economics	6 s. h.
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Division III. Elective Subject Matter Courses (14 sem. hrs.)

These may be selected from those courses listed below :

Group A—Business Education Department Courses (8 to 14 s. h.)

B. E. 401, 402, 404, 405, 406, 407A, 407B, 408, 409, 410A, 410B, 411, 412, 413, 414, 415, 416, 420	
B. E. 511, 512, 513, 514A, 514B, 515A, 515B, 516, 517A, 517B, 518, 519A, 519B	

Group B—Geography, Mathematics, and Social Studies Department Courses (up to 6 s. h.)

Other courses may be substituted for those in this group with the permission of the Head of the Business Education Department. Such substitution will be permitted only if it contributes to what may be considered the basic training requirements of a business education teacher.

Geog. 409, 410, 413, 414A, 414B, 419, 503, 504, 509

Math. 410, 505

Soc. St. 413, 441, 446, 450A, 450B, 454, 455, 456, 492A, 492B, 517, 522, 523, 524

Division IV. Integration Department Courses (6 sem. hrs.)

Group A—(2 sem. hrs. required)

Int. 503.	Methods and Instruments of Research	2 s. h.
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Group B—(4 sem. hrs. of elective credits—Select two courses)

Int. 407A, 407B, 408, 409, 500A, 500B, 500C, 504A, 505, 521A, 521B, 534, 535, 536, 537, 538, 551, 553	
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For information relative to eligibility for enrollment in Integration courses, see regulations outlined on page 42.

THE GRADUATE COURSES

BUSINESS EDUCATION 502. *Principles and Problems of Business Education*

The purpose of this course is to survey the basic principles and practices of business education. Among the topics considered are: the high school business program, developing courses of study, factors in curriculum construction, attitudes of management and labor toward education, and the relationship of general education to business education.

Credit: 2 semester-hours

BUSINESS EDUCATION 503. *Administration and Supervision of Business Education*

This course offers an opportunity to study the problems of organizing, directing, and supervising business education programs. Such matters as the functions of the administrator and supervisor of business education, textbook selection, teacher selection, testing programs, conferences, and equipment and layout are considered.

Credit: 2 semester-hours

BUSINESS EDUCATION 504. *Improvement of Instruction in Business Education*

This course seeks to bring together business education teachers regardless of subject matter fields to consider common problems involving general subject matter and methods of instruction including visual and auditory aids. It also offers opportunity for an individual to investigate and evaluate materials and methods in specific subject matter areas.

Credit: 2 semester-hours

BUSINESS EDUCATION 511. *Auditing*

This course seeks to develop the meaning and techniques of auditing procedure. It includes practice in the fundamental mechanics of auditing as well as in the making of the formal report on an audit.

Prerequisite: 8 semester-hours of accounting

Credit: 2 semester-hour

BUSINESS EDUCATION 512. *Tax Accounting*

The primary purpose of this course is to give a comprehensive picture of the Federal Tax structure, and to provide training in the application of basic principles to specific problems of the individual and corporation.

Prerequisite: 6 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 513. *Labor Problems*

This course provides an opportunity to study Federal and State Labor Laws and regulations. It also includes consideration of such matters as arbitration, collective bargaining, labor organizations, the labor contract, personnel management, and case problems.

Credit: 2 semester-hours

BUSINESS EDUCATION 514A. *Marketing Processes I*

The emphasis in this course centers about the application of the basic principles of marketing to specific case problems involving market institutions (brokers, auctions, exchanges, wholesalers, retailers, chains, cooperatives, and mail-order houses). Commodity marketing of farm products, industrial goods, and service industries are studied.

Credit: 2 semester-hours

BUSINESS EDUCATION 514B. *Marketing Processes II*

This course is a continuation of 514A, but course 514A is not a prerequisite. Some of the topics are: margins and expenses, turnover, market research, marketing policies, finance and credit policies, government regulations and competition. The case-problem approach is used predominantly.

Credit: 2 semester-hours

BUSINESS EDUCATION 515A. *Textiles I*

This course is important for its consumer and technical values. It develops selling points for textiles by furnishing a great deal of product information. Each student learns to classify and recognize various fabrics and their weaves.

Credit: 2 semester-hours

BUSINESS EDUCATION 515B. *Textiles II*

This course is a continuation of 515A, but course 515A is not a prerequisite. Emphasis is placed on the selection of appropriate fabrics for various types of clothing and for home furnishings including rugs.

Credit: 2 semester-hours

BUSINESS EDUCATION 516. *Business Organization and Management II*

The problem approach is used in this advanced course in considering such topics as ownership, finances, location and layouts, purchasing personnel, and managerial controls.

Credit: 2 semester-hours

BUSINESS EDUCATION 517A. *Advanced Business Law Cases I*

This course presupposes a knowledge of the basic principles of business law. It is designed to furnish a broader understanding and background in areas requiring considerable training to be effective in the classroom. Cases are concerned with the topics of contracts, negotiable instruments, and insurance.

Credit: 2 semester-hours

BUSINESS EDUCATION 517B. *Advanced Business Law Cases II*

This advanced law course is a continuation of B. E. 517A, but course 517A is not a prerequisite. A basic knowledge of the principles of law is, however, required. The course includes a further study of law cases pertaining to bailments, carriers, sales, property, landlord and tenant, torts, and business crimes.

Credit: 2 semester-hours

BUSINESS EDUCATION 518. *Advertising II*

This advanced course in advertising offers an opportunity to study in some detail the uses of various advertising media such as newspapers, magazines, radio, television, and direct mail, and to evaluate their effectiveness in terms of campaigns.

Credit: 2 semester-hours

BUSINESS EDUCATION 519A. *Advanced Accounting I*

The content of this course emphasizes an intensive study of the items making up accounting statements and the principles of valuation and income determination. Problem solving is an integral part of the course. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 519B. *Advanced Accounting II*

This course is a continuation of B. E. 519A, but course 519A is not a prerequisite. Topics treated include consignments, agency and branch accounting, consolidations, receivership accounting, estate and trust accounting. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 602. *Seminar in Economics*

This seminar is designed to meet the individual needs of the graduate student in business education or social studies by allowing him to pursue areas of work along economic lines in which he is not well versed. The program of participation consists of oral and written reports, developed through independent reading and individually directed field studies. In addition, group field trips are planned so as to give the student a first-hand knowledge of methods and practices of such organizations as banks, organized exchanges, manufacturing and marketing businesses. It is expected that the reports arising from these experiences will be in such form that they will be capable of being published or delivered as speeches before groups of people. An opportunity is given to view, evaluate, and work with, a variety of related visual and auditory aids.

Credit: 6 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

BUSINESS EDUCATION 401. *The Teaching of Business Education*

In this course a study is made of the history and development of business education, aims or objectives, human learning processes, lesson plans, teaching procedures, tests and measurements, and special helps for the teachers of business education.

Credit: 3 semester-hours

BUSINESS EDUCATION 402. *Salesmanship*

The principles of salesmanship in all types of selling activities are discussed. They are amplified and strengthened by individual selling demonstrations which require intensive study of the product to be sold in the demonstration and careful analysis of the desirable techniques for its sale. Visual aids and talks by salesmen, sales managers, and retail training directors add interest and purposefulness to the course.

Credit: 3 semester-hours

BUSINESS EDUCATION 404. *Business Economics*

This course deals with the business aspects of economics as related to contemporary and long range problems; operation and government control of public utilities; taxation, government finance, and labor and management problems.

Credit: 2 semester-hours

BUSINESS EDUCATION 405. *Marketing*

Marketing is the process of transferring goods from the producer to the consumer. The functions involved in this process, the various channels of distribution, marketing institutions, and the costs of marketing are considered in this course.

Credit: 2 semester-hours

BUSINESS EDUCATION 406. *Advertising I*

This course aims to acquaint the student with the social and economic aspects of advertising so that a fair evaluation may be made of its worth as well as its undesirable aspects. Copy appeals, the writing of copy, advertising layouts, and the selection of appropriate types of media for various advertisements are considered.

Credit: 2 semester-hours

BUSINESS EDUCATION 407A. *Consumer Education I*

This is a general introductory course designed to meet current needs for greater economic efficiency as outlined by the National Educational Policies Commission. The general objective of this course is to help improve the ability of individuals to choose and to buy economic goods and services so that standards of living may be raised. Some of the topics considered are: personal budgeting; the general art of buymanship; the cooperative movement; consumer standards and grade labels; weights and measures; governmental and producer aids for consumers; the wise buying of shelter, insurance, and investments; the intelligent use of installment buying and other forms of credit; and a general survey of the agencies for educating the consumer.

Credit: 2 semester-hours

BUSINESS EDUCATION 407B. *Consumer Education II*

This course is a continuation of Business Education 407A, but course 407A is not a prerequisite. The emphasis is on the economics of consumption with particular attention given to an analysis of the factors and forces back of consumer demand, such as custom, fashion, and advertising.

Credit: 2 semester-hours

BUSINESS EDUCATION 408. *Business Finance*

This course deals with the processes involved in the financing of business organizations from the time of their inception and promotion, during operation and expansion, and during the period of reorganization.

Credit: 2 semester-hours

BUSINESS EDUCATION 409. *Money and Banking*

This course provides a short historical survey of money and the evolution of banking, outside and within the United States. The organization of banks, the nature of their transactions, operations, and relations with other banks are considered. The functioning of the Federal Reserve System and the nature of the money markets are also examined.

Credit: 2 semester-hours

BUSINESS EDUCATION 410A AND 410B. *Cost Accounting*

The course deals with the basic principles of modern cost findings and cost keeping, and endeavors to give a practical application of these principles to present-day conditions.

Credit: 2 semester-hours each

BUSINESS EDUCATION 411. *Retail Store Management*

The work of the store manager in retail store operation is fully explored in this course. The problems of organization and management as they are encountered in various types of retail stores are discussed.

Credit: 2 semester-hours

BUSINESS EDUCATION 412. *Transportation and Communication*

The student in this course becomes acquainted with the various kinds of services rendered by transportation and communication agencies. He also receives some insight as to how to use these services most efficiently; the practices of the agencies; how and why they are controlled by the government.

Credit: 2 semester-hours

BUSINESS EDUCATION 413. *Business Statistics*

This course supplements courses in accounting and social business studies and includes a study of the fundamentals of statistics as they apply particularly to business data gathered from financial statements, sales records and personnel records. Laboratory techniques are used in developing the methods of presentation.

Credit: 2 semester-hours

BUSINESS EDUCATION 414. *Merchandising I*

This course analyzes the problems of how, what, where, and when to buy; the terms of purchasing; tested receiving and marketing procedures; the mathematics of merchandising—setting the retail price, planning mark-up and mark-down, and inventory controls. It is designed to assist the teacher of the prospective or actual small businessman.

Credit: 2 semester-hours

BUSINESS EDUCATION 415. *Public Finance*

This course aims to furnish a practical background for the student with respect to the nature and scope of governmental finance. Some of the areas studied are: the bases of taxation, income and expenses of government, and fiscal administration, including governmental budgets.

Credit: 2 semester-hours

BUSINESS EDUCATION 416. *Accounting Problems*

This course supplements previous courses in developing a broad and thorough understanding of basic accounting theory as it is applied to business management today. The problem approach is used.

Prerequisites: BUSINESS EDUCATION 301 and 302

Credit: 2 semester-hours

BUSINESS EDUCATION 420. *Field Studies in Business Education*

This orientation course aims to introduce business education students, through direct observational techniques, to the realities of the business world. Six field trips are made in the New York Metropolitan Area which include visits to business organizations where the following types of business activity or relationships may be observed: production, merchandising and advertising, finance, transportation and communication, employer-employee relationships, government and business relationships. The field trips are supplemented by regular class sessions where discussions are held and visual aids presented to make the visits more meaningful.

Credit: 2 semester-hours

DEPARTMENT OF ENGLISH

Graduate study in the Department of English is designed:

1. To increase the student's comprehension and appreciation of the literature of Great Britain and of the United States of America.
2. To introduce current materials and methods for improving instruction in English in the secondary school.
3. To show how language functions in individual expression and in social communication in the language arts; reading, writing, speaking, and listening.
4. To investigate recent experimentation and research in the teaching of English.

REQUIREMENTS IN THE ENGLISH DEPARTMENT

Graduate study leading to the Master's degree in English presupposes an undergraduate major in English of at least thirty semester-hours. Before matriculation, each candidate for the Master's degree secures from the Head of the Department an approved course outline requiring at least eighteen semester-hours in English at the senior-graduate level. Distribution of these courses is as follows:

I. *Required Work in Literature.* Minimum requirements—12 semester-hours

A. American Literature. Minimum requirements—4 semester-hours.

These may be selected from the courses listed below:

Eng. 406, 407, 413, 421, 438, 439, 442A, 442B, 443, 446, 450, 460, 525

B. British Literature. Minimum requirements—6 semester-hours

These may be selected from the courses listed below:

Eng. 402, 404, 405, 406, 407, 413, 420, 421, 422, 426, 431A, 431B, 443, 445, 446, 502, 503, 505, 506, 515, 518, 521

C. World Literature. Minimum requirement—2 semester-hours

This may be selected from the courses listed below:

Eng. 427, 432, 441, 447, 451, 459, 513, 514, 520A, 520B, 524, 528, 530

II. *Required Work in Language Study.* Minimum requirements—4 semester-hours

A. Language Study. Minimum requirement—4 semester hours
These may be selected from the courses listed below :

Eng. 408, 419, 507, 511, 512, 516

*B. Reading Courses

These courses are as follows :

Eng. 430, Eng. 455, Int. 430, Int. 530A, Int. 530B, Int. 532

*C. Speech Courses

These courses are as follows :

Eng. 410, 417, 435, 448, 449, 454, 456, 457, 458, 461A, 461B, 462, 463, 464, 466, 467, 522

*NOTE: Either a course in reading or a course in speech may be offered toward meeting two of the required four semester-hours in this area.

III. *Required Work in the Teaching of English.* Minimum requirement—2 semester-hours

This may be selected from the courses listed below :

Eng. 401, 401X, 409, 517, 519

IV. Departmental Examination for which no academic credit may be given

All candidates for the Master's degree in English must pass a written comprehensive examination before the degree is awarded. Information concerning the examination may be secured from the Head of the Department.

The candidate may elect to write a thesis of professional value in the teaching of English in the secondary school. Four semester-hours of credit are granted for this thesis, but this credit cannot be considered part of the minimum eighteen semester-hours unless written permission is secured in advance from the Head of the Department.

GRADUATE COURSES

ENGLISH 502. *Victorian Poetry*

The most important English poets who wrote during the transition from the Victorian to the modern period are read and discussed. An important feature of the course is the analysis and appreciative reading of the lyric poetry of Rossetti, Swinburne, Hardy, Bridges, G. M. Hopkins, Francis Thompson, A. E. Housman, Kipling, and W. B. Yeats.

Credit: 2 semester-hours

ENGLISH 503. *Geoffrey Chaucer and His Times*

Some of the works of Chaucer are read rapidly, others studied intensively, so that the students may acquire a broad general understanding of Chaucer's place in the history of English literature as well as facility in reading and interpreting the medieval text of his stories.

Credit: 2 semester-hours

ENGLISH 505. *Philosophy and English Poets*

This course is designed to show the dependence of such English poets as Wordsworth, Coleridge, Shelley, Keats, Tennyson, and Browning upon the philosophical thinking of their day. The course aims to provide a philosophical background for the reading of teachers of modern literature and for the interpretation of much of the poetry which they teach in high school.

Credit: 2 semester-hours

ENGLISH 506. *John Milton*

This course has for its primary aim the understanding and evaluation of Milton's poetry. Contributory to this end are the following topics: the Puritan struggle for civil and religious liberty; the growth of science in the seventeenth century; the life, personality, and prose writings of Milton; his literary heritage and influence; comparison of Milton with the Cavalier Metaphysical poets.

Credit: 2 semester-hours

ENGLISH 507. *Critical Writing*

This course evolves a body of critical principles for judging art and literature, and provides training in the writing of criticism, ranging from comments upon pupils' themes to a full and comprehensive essay upon the work of some outstanding author.

Credit: 2 semester-hours

ENGLISH 511. *The History of Literary Criticism*

The purpose of this course is to familiarize the student with the chief doctrines of the great critics from Aristotle to I. A. Richards and T. S. Eliot and to correlate these critical doctrines with the outstanding writings of each age. By such a study it is possible for the student to evaluate the historical interrelations of expert criticism and literary production. A basic text is used, but much of the information is gleaned from source materials.

Credit: 2 semester-hours

ENGLISH 512. *The Growth and Structure of the English Language*

This course is designed to help the high school teacher understand the structure of modern English, one of the most complicated of contemporary tongues. Through an analysis of the historical evolution of our language, the student discovers the reasons for many of the seemingly illogical and arbitrary characteristics of modern English spelling, grammar, and morphology.

Credit: 2 semester-hours

ENGLISH 513. *The Renaissance*

This course deals with Petrarch and the humanists; Boccaccio and the *Novelle*; the House of the Medici, Savonarola, the Popes; Machiavelli and *The Prince*; Cellini and the *Autobiography*; Castiglione and *The Courtier*; Boiardo, Pulci, Ariosto, and the romantic epic; the drama; the art of Da Vinci, Botticelli, Michelangelo, Raphael, Titian, and others; Rabelais and the *Gargantua and Pantagruel*; Cervantes and *Don Quixote*; Ronsard and the French *Pleiade*.

Credit: 2 semester-hours

ENGLISH 514. *Origin and Development of the Arthurian Legend*

This course deals with the vague and tentative beginnings of the Arthur story in early chronicle and legend; with Geoffrey of Monmouth's pseudo-historical and Chretien de Troyes's romantic treatments; with the great medieval recapitulations of Gottfried von Strassburg, Wolfram von Eschenbach, and Sir Thomas Malory; with the Victorian retellings of Tennyson, Arnold, and Morris; with the musical adaptations of Wagner; and with the modern versions of E. A. Robinson. It includes a detailed history of the development of the legend in its divers forms.

Credit: 2 semester-hours

ENGLISH 515. *Robert Browning*

Browning's characteristic shorter poems are recalled or studied in order to define his fundamental ideas as a writer. This is followed by a study of his longer poems and dramas: the "soul-studies", *Pauline*, *Paracelsus* and *Sordello*; the dramas, *Strafford*, *Pippa Passes*, *A Blot in the 'Scutcheon*, *Colombe's Birthday*, and *In a Balcony*; the translations, *The Agamemnon of Aeschylus*, and *Balaustion's Adventure*; and Browning's masterpiece, *The Ring and the Book*. These works are studied for their literary and philosophical values, as showing the development of Browning as man, poet, and philosopher, and as a reflection of certain phases of nineteenth-century life and thought.

Credit: 2 semester-hours

ENGLISH 516. *Language Problems in the English Curriculum*

This course reviews the several theories of language and studies the problem of meaning in order to arrive at a suitable technique for the interpretation of prose and verse. This technique is then applied to the problems of reading, of composition, of speech, and of appreciation of literature. The course has two aims: to increase the student's own skill in dealing with language, and to increase his effectiveness in teaching.

Credit: 2 semester-hours

ENGLISH 517. *Recent Research and Experiment in the Teaching of English*

This course analyzes and evaluates current research in the fields of language, literature, and composition relevant to the teaching of English in the high school, and examines critically recent experimentation in methods of teaching English. The aim of the course is to make available to the student any recent knowledge and experience which may throw light on the problems of English teaching in secondary schools and to evaluate tendencies in this field. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 518. *The Major Romantic Poets*

This course studies the work of Coleridge, Wordsworth, Scott, Byron, Shelley, and Keats. It devotes especial attention to the poems which are best adapted for the reading of high school students.

Credit: 2 semester-hours

ENGLISH 519. *English in the Modern High School*

This is a seminar in which the methods and materials requisite to the development of a program in the language arts (listening, speaking, reading, and writing) are considered.

Credit: 2 semester-hours

ENGLISH 520A and 520B. *Great Books on Education*

Students examine the classics dealing with educational theory and practice which they so often read about but rarely consult: Plato's *Republic*, Xenophon's *Cyropaedia*, Cicero's *De Oratore*, Castiglione's *Courtier*, Machiavelli's *Prince*, Rabelais's *Abbey of Theleme*, Ascham's *Schoolmaster*, Bacon's *Novum Organum*, Defoe's *Projects*, Milton's *To Samuel Hartlib on Education*, Rousseau's *Emile*, Byron's *Don Juan*, Hughes' *Tom Brown's Schooldays*, Newman's *Idea of a University*, the Arnold-Huxley debates, and the works of

John Dewey and Jacques Barzun. This course is recommended for graduate students in the Department of Integration.

Part A—Plato to Rousseau.

Part B—Rousseau to Dewey.

Credit: 2 semester-hours each

ENGLISH 521. *English Literature of Social Problems*

This course surveys English literature as English 460 deals with American literature. The period from 1800 to 1914 is covered, and the principal authors discussed include Shelley, Dickens, Kingsley, Tennyson, Carlyle, Butler, Meredith, Galsworthy, Bennett, Shaw, and Wells. English 460 is not prerequisite to this course.

Credit: 2 semester-hours

ENGLISH 522. *Advanced Phonetics*

This course provides ear-training to develop skill in recognizing and distinguishing atypical English speech sounds, regional differences in pronouncing American English, and foreign sounds heard in English speech. This is followed by extensive practice in transcribing speech sounds into International Phonetic Alphabet symbols and in reading International Phonetic Alphabet transcriptions. A thorough study of the speech characteristics of some geographical region with which the student is personally familiar is required of each student.

Credit: 2 semester-hours

ENGLISH 524. *Five Great Books*

The aim of this course is to broaden and to deepen the student's general cultural perspective by a study of five books which have profoundly influenced present civilization. The actual choice of texts is a cooperative class enterprise. Selections are made from such books as: *The Bible*, Homer's *Odyssey*, Plato's *Republic*, Shakespeare's *Hamlet*, Rousseau's *Confessions*, Goethe's *Faust*, Tolstoy's *War and Peace*, Dewey's *The School and Society*. This course is designed to provide leadership in local "Great Books" meetings.

Credit: 2 semester-hours

ENGLISH 525. *The Development of the American Novel*

The American novel as a contemporary art form is examined in this course. Beginning with the novels of the early nineteenth century the course traces the rise and development of the Romantic and the Realistic novel and concludes with an example of American Naturalism. Written criticism of five novels is required.

Credit: 2 semester-hours

ENGLISH 528. *New Perspectives in World Literature*

The point of view of our own democratic culture is surveyed and established in an attempt to see how the literatures of Western Europe, the Middle East, and the Orient have influenced and are influencing modern thinking. Such perspectives are designed to provide adequacy in teaching a world point of view through literature.

Credit: 2 semester-hours

ENGLISH 530. *Dante and His Influence in England and America*

Fully two-thirds of the time of this course is devoted to rereading and reassessment of Dante himself in English translation. When Dante's meaning has been revealed, his continued influence from Chaucer through Sackville, Spenser, and Milton to Rossetti, Longfellow, and T. S. Eliot becomes the subject of investigation.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

ENGLISH 401. *The Teaching of English in Secondary Schools*

Students are taught to develop and use materials of the classroom: lesson plans and units of work are prepared and presented for criticism, textbooks are analyzed for training in their use, and bulletin board exhibits and visual education materials are prepared by students for the class. Observation and criticism of teaching in the College High School, and criticism of student compositions are required.

Credit: 3 semester-hours

ENGLISH 401X. *The Teaching of English in Secondary Schools*

Students are taught to develop and use materials of the classroom; lesson plans and units of work are prepared and presented for criticism; textbooks are analyzed for training in their use; and bulletin board exhibits and visual and auditory aids are prepared by students for the class.

Credit: 2 semester-hours

ENGLISH 402. *Survey of British Literature to 1798*

This course draws together into a systematic narrative the story of the development of English literature from the beginnings to the romantic triumph of 1798.

Credit: 4 semester-hours

ENGLISH 404. *Survey of British Literature*

This course is a continuation of English 402. It takes up the story with the romantic triumph in 1798 and continues it to the present time.

Credit: 2 semester-hours

ENGLISH 405. *The Victorian Poets*

The poetry of the Brownings, Tennyson, Arnold, Clough, Morris, the Rossettis, and Swinburne is presented as a reflection of the moral, religious, social, and political life of nineteenth-century England.

Credit: 2 semester-hours

ENGLISH 406. *The Modern Novel*

Particular emphasis is given to British and American novels since 1870, and the important tendencies of present-day prose fiction are explored.

Credit: 2 semester-hours

ENGLISH 407. *British and American Biography*

Both the old and new types of biography are read and studied in this course, with emphasis upon the nineteenth and twentieth centuries.

Credit: 2 semester-hours

ENGLISH 408. *Creative Writing*

Students in this course attempt seriously the standard literary forms in prose and verse.

Credit: 2 semester-hours

ENGLISH 409. *The Teaching and Appreciation of Poetry*

This course is both personal and professional. It develops the student's appreciation of poetry as an expression of life and as a form of art, and it considers in detail the aims and methods of teaching poetry.

Credit: 2 semester-hours

ENGLISH 410. *Speech Pathology*

This course deals with diagnostic and corrective procedures, causes and treatment for major or pathological speech problems including severe stuttering, voice disorders, laryngectomy, cleft-palate, cerebral palsy, and aphasia. This course is required to teach speech and speech defectives.

Prerequisites: ENGLISH 208 and 209

Credit: 2 semester-hours

ENGLISH 413. *Modern Poetry*

This course deals with the work of contemporary poets, both British and American.

Credit: 2 semester-hours

ENGLISH 414. *Public Relations and School Publicity*

This course considers such problems as the development of a student publicity staff, preparation of copy for professional newspapers, publicity for school news, and the development of better school-community relations. A study is made of other publicity media, including radio, visual aids, the platform, displays and exhibits, special events, sports promotion and fund-raising. A background of elementary journalism is helpful in this course.

Credit: 2 semester-hours

ENGLISH 417. *Methods in the Teaching of Speech*

In this course a study is made of the objectives of speech education at each grade level; of the problems, approaches, materials, textbooks, and techniques in specific speech areas; of modern trends in instruction; and of the integration of speech with other academic departments of study. This course is required to teach speech.

Credit: 3 semester-hours

ENGLISH 419. *Grammar for Teachers*

This course is a study of the basic facts of grammatical relationships in English, and of the current problems of "rules" as opposed to "usage." The primary aim of the course is to acquaint students with the true function of grammar in speech and writing.

Credit: 2 semester-hours

ENGLISH 420. *High School Classics*

This course is a seminar for prospective student teachers on the problem of teaching literature in high schools. The student reads numerous articles on the "classics" vs. the "moderns" controversy, becomes thoroughly acquainted with the contents and aims of the best high school anthologies currently in use, and builds up a working philosophy for his own teaching. Through the continued practice of reporting and discussion leading, the student is enabled to integrate his total experience in college.

Credit: 2 semester-hours

ENGLISH 421. *The Short Story*

This course traces the history of the short story as an evolving literary form, emphasizing the productions of the nineteenth and twentieth centuries.

Credit: 2 semester-hours

ENGLISH 422. *Seventeenth Century Literature*

This course aims to give students an appreciation of the prose style and intellectual content of the best thinkers and writers of the first "modern" century—Bacon, Burton, Walton, Bunyan, Hobbes, Pepys, Dryden; and of the poetic art of Donne and the "Metaphysicals"—Jonson, Herrick, and the "Cavaliers"—Herbert, Cowley, Vaughan, Dryden, and others.

Credit: 2 semester-hours

ENGLISH 426. *The Victorian Novel*

This is an intensive unit of work on the novel in Victorian England. Novels studied in the high school are treated professionally in class.

Credit: 2 semester-hours

ENGLISH 427. *Theatre and Society*

Dramatic expression from the time of the ancient Greeks to the present is studied carefully to analyze social, political, and ethical trends as they are reflected in the drama.

Credit: 2 semester-hours

ENGLISH 430. *Reading in Secondary Schools*

After examination of recent research concerning reading activities at various age levels, the class examines and evaluates methods devised to develop reading skills, to increase vocabularies, and to improve the comprehension of secondary school students.

Credit: 2 semester-hours

ENGLISH 431A and 431B. *Shakespeare*

This course, in two parts, presents all of Shakespeare's plays as opposed to those taught only in high school, which is the chief concern of English 301B. Here the poet's full development can be seen, providing a complete critical experience. Critical analysis, contentual evaluation, and textual problems are the main areas of concern. Part A deals with tragedies; Part B, the comedies. The chronicle plays are woven into the discussion.

Credit: 2 semester-hours each

ENGLISH 432. *The Development of the Drama*

The development of the drama is studied in all periods from ancient Greece and Rome through the Middle Ages and the Renaissance to the beginning of modern drama with Ibsen. The emphasis of the course is placed on the major characteristics of the drama and its necessary complement, the theatre. Representative plays are read and discussed.

Credit: 2 semester-hours

ENGLISH 435. *Stagecraft*

This workshop course provides training in construction and painting of scenery and lighting the stage. A minimum of twelve clock hours of craft work upon a production of the College or College High School is required for credit in this course.

Credit: 2 semester-hours

ENGLISH 438. *Masters of American Literature*

Significant American writers, including Irving, Hawthorne, Poe, Emerson, Melville, Whitman, and Mark Twain, are studied to discover their contributions to American life and to reveal important forces in our national background.

Credit: 2 semester-hours

ENGLISH 439. *Contemporary American Literature*

This course studies the major authors and literary movements in America during the contemporary period. Beginning where the course in *Masters of American Literature* normally ends, it is designed to complete a unit in this subject.

Credit: 2 semester-hours

ENGLISH 441. *Medieval Epic, Saga, and Romance*

This course deals with the chief medieval epics, sagas, and romances from the literatures of England, France, Germany, Ireland, Iceland, Wales, and Italy in modern English translation.

Credit: 2 semester-hours

ENGLISH 442A and 442B. *American Literature*

This chronological survey reflects the interplay of life and letters in the American scene, examining the political, social, and ethical motivations of the great movements in literature, and reading the separate works in the light of the influences that brought them into being. Part A commences with the Puritan Tradition and ends just as the Civil War is beginning. Part B traces, in life and in literature, the growth of the great democratic tradition in America.

Credit: 2 semester-hours each

ENGLISH 443. *Modern Drama*

An historical survey of trends, dramatists, plays, and accomplishments from Ibsen to the latest prize plays on Broadway provides background for this course.

Credit: 2 semester-hours

ENGLISH 445. *Eighteenth Century Literature*

Major essayists, poets, dramatists, novelists, and letter writers are read and evaluated in terms of the thought, life, and literary movements of their own time and of their significance for the present generation.

Credit: 2 semester-hours

ENGLISH 446. *The One-Act Play*

This course studies the one-act play as an art form, devoting special attention to plays which are suitable for high school production.

Credit: 2 semester-hours

ENGLISH 447. *Philosophy of Great Literature*

By studying one or two masterpieces in a given semester this course aims to help the student develop a plan of study to achieve a systematic understanding of the philosophic world-views and life-views implicit in such works as: Aeschylus's trilogy, *The Oresteia*; Plato's *Timæus*; Boethius's *Consolations of Philosophy*; Dante's *Divine Comedy*; Shakespeare's *Hamlet*; Milton's *Paradise Lost*; Pascal's *Pensées*; Goethe's *Faust*; Blake's *The Marriage of Heaven and Hell*; Dostoevski's *Brothers Karamazov*; Mann's *The Magic Mountain*; Hesse's *Demian*; Henry Adams's *Mont St. Michel* and *Chartres*; the *Bhagavad-Gita*; Lao-tse's *The Book of Tao*; and Auden's *Collected Poetry*.

Credit: 2 semester-hours

ENGLISH 448. *Choral Speaking*

As members of a speaking choir, students acquire skill in interpreting various forms of literature suitable for group treatment.

Credit: 2 semester-hours

ENGLISH 449. *Public Speaking*

This is an advanced course in the theory and practice of public speaking. It provides opportunity for training in the more complex speech skills, especially in the techniques of leadership in speech sit-

uations and the techniques for making speech responses in co-operative situations.

Prerequisite: ENGLISH 204 or the equivalent

Credit: 2 semester-hours

ENGLISH 450. *American Drama in American Democracy*

This course studies the part played by American drama in the evolution of American democracy from the eighteenth century up to the contemporary period.

Credit: 2 semester-hours

ENGLISH 451. *Literature and Art in Western Culture*

This course deals with the nature of literature and considers its importance as a factor in the development of international understanding. It deals with the relation between the use of language in literature and with the methods of art, since the re-creation of experience is a function common to both. Through reading the literature which is being read by our neighbors today, both in Europe and in the Western Hemisphere, students are able to participate in a common experience with them.

Credit: 2 semester-hours

ENGLISH 454. *Training the Speaking Voice*

This is a course in the study of the problems of speech, the development of a pleasing speaking voice with precision in diction, and the application of speech skills to practical speaking situations.

Credit: 2 semester-hours

ENGLISH 455. *Reading Interests of High School Students*

Through wide reading, study and preparation of bibliographies, and establishing criteria for judging current books, the student is prepared to guide the recreational reading of junior and senior high school students. Credit cannot be given for both English 301A and 455.

Credit: 2 semester-hours

ENGLISH 456. *Play Direction*

This course covers the choosing and casting, as well as directing, of plays. Scenes are directed for class criticism, and a detailed prompt-book of one play is prepared. This course complements English 435.

Credit: 2 semester-hours

ENGLISH 457. *Workshop in Speech Activities*

It is the purpose of this course to prepare students to organize and to conduct assembly programs, PTA demonstrations, and similar activities. Class lectures and discussions cover all phases of the director's responsibilities. Groups conduct research on suitable program materials and share their findings with classmates. Each student prepares a list of programs of various types which he could present during a school year.

Credit: 2 semester-hours

ENGLISH 458. *Radio Directing*

This course offers training in the organization and direction of radio programs, and equips the student to select material for broadcasting and to cast and to rehearse programs. Listening is directed toward an analysis of common radio presentation techniques and the appreciation of successful programs.

Credit: 2 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

Some of the contributions which have gone into the making of Chinese literature, such as the *Book of Odes* of Confucius, the poems of Li Po and Tu Fu, the Lute Song, and the Dream of the Red Chamber, are considered in this course. Aside from a general survey of the great literature of China special attention is given to English translations of the masterpieces of Chinese literature. There are twenty-four hours of lectures in the morning; after lunch each day a period of forty-five minutes is devoted to informal talks, story-telling, singing of Chinese songs, and showing of motion pictures. During the workshop period individual students work on specific topics under the guidance of the instructor.

Prerequisite: SOCIAL STUDIES 499—*Introduction to Chinese Culture*

Credit: 3 semester-hours

ENGLISH 460. *American Literature of Social Problems*

This course surveys the American literature which presents social problems during the period from 1800 to 1914 in an attempt to discover the attitudes of the various authors toward these problems. The works of such authors as Cooper, Lowell, Thoreau, Whitman, Howells, Bellamy, Garland, and Glasgow are studied from this point of view. Enough of the social background of the period is discussed to give the necessary perspective for the discussion of the literature,

but the emphasis is placed on the reflection of the problems in literature and not merely on the problems themselves.

Credit: 2 semester-hours

ENGLISH 461A. *Speech Laboratory Practice*

After the techniques of interviewing, of preparing case histories, of diagnosing speech disorders, of planning therapies, and of determining prognoses have been taught through lectures and demonstration lessons, each student is assigned one or more persons with speech defects for supervised practice in correcting speech disorders. Credit is given on a laboratory basis, and the course meets three hours weekly. This course is required for the teaching of speech defectives.

Credit: 2 semester-hours

ENGLISH 461B. *Advanced Speech Laboratory Practice*

This course provides for additional supervised speech correction practice with adults or children with speech disorders. Credit is given on a laboratory basis, and the course meets three hours weekly.

Credit: 2 semester-hours

ENGLISH 462. *Group Discussion and Leadership*

Students are taught the principles of democratic discussion and methods for guiding the committee meeting, panel symposium, lecture, and debate forums. Frequent opportunities to apply these principles and methods are given through discussion of topics chosen by the class.

Credit: 2 semester-hours

ENGLISH 463. *Audio-Visual Aids in Teaching Speech*

The aim of this course is to equip prospective teachers to understand the desirable characteristics; capabilities; and all possible uses of charts, models, projection equipment, and magnetic and disc recorders available for the teaching of speech. The distribution, cost, operation, servicing, and storing of instruments and of supplies are also considered.

Credit: 2 semester-hours

ENGLISH 464. *Speech Psychology*

The mental processes involved in acquiring language and in using it in effective oral communication are reviewed. Problems involving psychological principles as they apply to oral teaching, to audience leadership and control, to the alleviation of stage fright, and to the teaching of speech improvement are considered along with the principles of general semantics.

Credit: 2 semester-hours

ENGLISH 465. *Speech Arts Activity*

Each speech major is required to earn at least one semester-hour of credit in some supervised speech arts activity, such as: playing a major role in a major production; directing a three-act play or its equivalent; giving a public play reading or lecture recital; directing a series of assembly programs; or directing and producing a series of radio programs.

Credit: 1 semester-hour

ENGLISH 466. *Speech Development: Improvement and Reeducation*

This course is intended for superintendents, principals, and classroom teachers who have little or no background in speech education. Consideration is given to the following topics: (1) speech development; (2) speech difficulties or problems found on the kindergarten, elementary, and secondary school levels; (3) acquisition of good voice and speech characteristics; (4) use of techniques and materials in classrooms to motivate good speech patterns; and (5) ways of setting up and integrating speech education in school systems. Demonstrations with individuals and groups are made, and students are expected to prepare a practical project.

Credit: 2 semester-hours

ENGLISH 467. *Oral Interpretation for the Teacher*

This course is organized as a laboratory to help the teacher develop his potentialities in oral reading. Each student is given many opportunities to read aloud and to participate in informal critiques. Assistance is given in compiling a repertory of selections most useful in daily teaching.

Credit: 2 semester-hours

DEPARTMENT OF FOREIGN LANGUAGES

In answer to the growing demand for graduate work, the Foreign Language Department offers a program based on STUDY ABROAD. Through personal contact and experience, the student, thus, can increase both his knowledge and understanding in respect to the people whose language he is preparing to teach. This means that the student will do part of his graduate work at a selected college in a country where the language of his major is spoken. To assist with this program of STUDY ABROAD, the Foreign Language Department yearly offers scholarships for qualifying applicants. These scholarships are sustained by a Student Exchange Fund. Students who are interested in obtaining a STUDY ABROAD scholarship should consult with the Head of the Department for particulars. Sixteen semester-hours of graduate credit are granted for this work. The remaining sixteen hours necessary for the Master's degree are to be selected from graduate courses offered at Montclair. There is also required a final comprehensive examination in the student's major field. The following plan outlines the work for a Master's degree in the Department of Foreign Languages:

<i>Required Courses</i>		<i>Credits</i>
French 502	<i>Study Abroad</i>	16 semester-hours
or		
Spanish 502	<i>Study Abroad</i>	16 semester-hours
Integration 503	<i>Methods and Instruments of Research</i>	2 semester-hours
<i>Electives</i> (To be selected in consultation with the Head of the Foreign Language Department)		
Integration courses		4 semester-hours
Graduate courses in other departments of the college		10 semester-hours
Total		32 semester-hours

Final comprehensive examination in major field of foreign language.

FRENCH 502. *Study Abroad*

Credit: 16 semester-hours

SPANISH 502. *Study Abroad*

Credit: 16 semester-hours

DEPARTMENT OF INTEGRATION

Graduate courses in this department meet one or more of three needs: (1) instruction in Administration and Supervision, leading to the A. M. degree and New Jersey certification for one or more of the positions of Subject Supervisor, General Supervisor, Elementary School Principal, Secondary School Principal, Supervising Principal, and Superintendent; (2) instruction in Personnel and Guidance, leading to the A. M. degree and New Jersey certification in guidance; and (3) instruction in advanced professional courses for the classroom teacher.

In pursuit of the above objectives most graduate courses in the Department of Integration are designed for students who are having or have had teaching experience. Other courses presuppose at least a teaching certificate. Enrollment in graduate Integration courses, therefore, is subject to the following restrictions:

1. *Students Who Do Not Have a Teaching Certificate*—Graduate students in this classification may enroll in undergraduate and senior-graduate (400 level) courses in order to meet certification requirements. They also may enroll in the following graduate Integration courses: 500A, 500B, 500C, 505, 540, 550, 551, and 552. (These courses are designated in the descriptions below by a single asterisk *.) Not more than eight semester-hours earned in senior-graduate and the graduate courses listed above may be counted toward an A. M. degree in the Integration Department.
2. *Graduate Students Who Possess a Teaching Certificate But Who Have No Teaching Experience*—Students in this classification may enroll for any of the courses listed in the previous paragraph and also Int. 500D, 500E, 500F, and 503. (These additional courses are designated below by a double asterisk **.) They may count no more than eight semester-hours in any courses earned prior to matriculation for the A. M. degree.
3. *Students Matriculated for the A. M. Degree*—Graduate students working toward an A. M. degree in either the field of Administration and Supervision or Personnel and Guidance are permitted to matriculate only when they are having or have had teaching experience. Students majoring in Personnel and Guidance are required to have two years of teaching experience before the degree can be conferred.

4. Students who plan to remain classroom teachers are not encouraged to seek an A. M. degree in either the field of Administration and Supervision or Personnel and Guidance.
5. Courses in the teaching of elementary school subjects are offered primarily to help graduate students to complete certification in this field. Such courses may be counted toward an A. M. degree only under certain conditions which are outlined by the Integration Department graduate adviser.

I. COURSE REQUIREMENTS FOR THE A. M. DEGREE IN ADMINISTRATION AND SUPERVISION

A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience. (Not more than eight semester-hours will be counted toward this degree prior to the obtaining of this certificate and experience.)	
B. Satisfactory completion of not fewer than 32 semester-hours as follows:	
1. Basic Requirements	S. H.
Int. 500A. <i>Basic Educational Trends</i>	2
Int. 500D. <i>School Administration I. Functions, Organization</i>	2
Int. 500E. <i>School Administration II. Law and Finance</i>	2
Int. 500F. <i>School Administration III. Community Relations</i>	2
Int. 503. <i>Methods and Instruments of Research</i>	2
either 2. For Specialization in Secondary Education	
Int. 508. <i>Supervision of Instruction in Secondary Schools</i>	2
Int. 502. <i>Organization and Administration of the Modern High School</i>	2
Int. 504A. <i>Curriculum Construction in the Secondary School</i>	2
or 2. For Specialization in Elementary Education	
Int. 517. <i>Administration of the Elementary School</i>	2
Int. 518. <i>Supervision of Instruction in Elementary Schools</i>	2
Int. 548. <i>Curriculum Construction in the Elementary School</i>	2
3. Electives in Integration	
The student with his adviser's approval will select a minimum of 8 semester-hours in additional Integration courses numbered 400 or above.	8-16
4. Electives in other departments	
A student may count toward the degree not more than eight semester-hours in other departments of the College. He is encouraged to elect courses which will broaden his interests and background.	0-8
Total	32

NOTES:

1. Graduates from New Jersey State Teachers Colleges may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Chairman of the Graduate Committee.
2. Students who are interested in obtaining principals' or supervisors' certificates may obtain mimeographed lists of the courses which will be counted toward these certificates.

II. COURSE REQUIREMENTS FOR THE A. M. DEGREE IN PERSONNEL AND GUIDANCE

A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience. (Not more than eight semester-hours will be counted toward this degree prior to the obtaining of this certificate and experience.)

B. Satisfactory completion of not fewer than 32 semester-hours as follows:

	1. Basic Requirements (Total of 20 semester-hours)	S. H.
	Int. 500F. <i>Community Relations</i>	2
	Int. 503. <i>Methods and Instruments of Research</i>	2
	Int. 520. <i>Principles of Mental Hygiene</i>	2
	Int. 521A. <i>Educational and Psychological Measurement in Guidance</i>	2
either or	Int. 500B. <i>Advanced Educational Psychology</i>	2
	Int. 550. <i>Child and Adolescent Development</i>	
	Int. 551. <i>Principles and Techniques of Guidance</i>	2
	Int. 535. <i>Vocational Guidance</i>	2
	Int. 536. <i>Educational Guidance</i>	2
	Int. 537. <i>Social-Moral Guidance</i>	2
	Int. 538. <i>Group Guidance and Counseling Activities</i>	2
	2. Primary Electives (Minimum of 4 semester-hours required)	
	Int. 602. <i>Seminar in Guidance</i>	4
	Int. 505. <i>Organization and Administration of Extra-Curricular Activities</i>	2
	Int. 530A. <i>Corrective and Remedial Reading in Secondary Schools</i>	2
	Int. 521B. <i>Psychological Tests in Guidance Programs</i>	2
	Eng. 466 <i>Speech Development: Improvement and Re-education</i>	2
	3. Secondary Electives (Maximum of 8 semester-hours permitted)	
	Courses in related and unrelated subjects in other departments of the College	
	Math. 400. <i>Educational Statistics</i>	2
	Soc. St. 439. <i>The Family and Its Problems</i>	2
	Soc. St. 443. <i>Youth and the Community</i>	2
	Soc. St. 444. <i>The Social Bases of Human Relations</i>	2
	Soc. St. 450. <i>Modern Economic Problems</i>	4
	Eng. 464. <i>Speech Psychology</i>	2
	Int. 409. <i>Radio and Sound Equipment in the Classroom</i>	2
	OR any other courses in the graduate program	
	Total	32

NOTE:

1. Graduates from New Jersey State Teachers Colleges may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Chairman of the Graduate Committee.

GRADUATE COURSES

**INTEGRATION 500A. Basic Educational Trends*

This course deals with the historical background which administrators and supervisors, as well as teachers, need in order to evaluate problems and policies in due perspective. It emphasizes the current trends in American society and their bearing upon education. It also considers philosophies concerning the causes of rises and declines in outstanding civilizations and the part education could play among them.

Credit: 2 semester-hours

**INTEGRATION 500B. Advanced Educational Psychology*

The course covers the various aspects of growth. Individual differences, their measurement, and their bearing on educational practices and principles furnish topics of study and discussion. Principles and laws of learning are reviewed. Some time is given to problems of personality as encountered in school work. The several points of view which have been prominent in the psychology of the past fifty to seventy-five years are examined for their contributions to thinking about human nature.

Prerequisite: An introductory course in psychology.

Credit: 2 semester-hours

**INTEGRATION 500C. Recent Trends in Secondary School Methods*

This course emphasizes the fundamental principles underlying the technique of teaching on the secondary school level. Some of the topics considered are: organization of knowledge, the logical and psychological aspects of method, developing appreciations, social-moral education, teaching motor control, fixing motor responses, books and verbalism, meeting individual differences, guidance in study, tests and examinations, marks and marking.

Credit: 2 semester-hours

***INTEGRATION 500D. School Administration I: Functions and Organization*

This introductory course in educational administration is concerned with general functions and personnel, as well as with the general organization, of public education on local, State, and national levels. It deals also with Federal-State relations, the State and sectarian education, the expanding scope of modern school systems, types and bases of school organization, and professional ethics.

Credit: 2 semester-hours

****INTEGRATION 500E. *School Administration II: Law and Finance***

This course acquaints the student with the allied fields of school law and school finance, with special reference to New Jersey. Its topics include basic principles of public school support, taxation, Federal aid, educational finance, legal provisions for school district borrowing, tenure provisions, and rights and duties of school boards and officials.

Credit: 2 semester-hours

****INTEGRATION 500F. *School Administration III: Community Relations***

This course concerns the relation of the school to other educational efforts of the community. It considers the scope and types of agencies and informal influences of an educational nature, and also the agencies and methods by which the best total co-operative effort can be attained. It deals also with methods and plans of publicity. Constant reference throughout is made to New Jersey localities.

Credit: 2 semester-hours

INTEGRATION 502. *Organization and Administration of the Modern High School*

The following topics are considered: the student personnel, building and revising the high school curriculum, providing for individual differences, making the school schedule, records, the guidance program, pupil participation in government, the extra-curricular program, the health program, the safety program, discipline, library and study hall, cafeteria, the principal's office, and evaluating results.

Credit: 2 semester-hours

****INTEGRATION 503. *Methods and Instruments of Research***

This course is required of all candidates for the Master's degree without regard to their field of major interest. Its purpose is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student sets up a problem and plans and carries out its solution. It is recommended that this course be taken early in the graduate program.

Prerequisite: MATHEMATICS 400

Credit: 2 semester-hours

INTEGRATION 504A. *Curriculum Construction in the Secondary School*

The purpose of this course is to introduce the student to constructive criticism of American culture, to consider the extent to which the secondary school curriculum meets the needs of a changing civilization, and to consider effective means of curriculum construction.

Credit: 2 semester-hours

INTEGRATION 504B. *Seminar in Curriculum Organization*

This course is for students actively engaged in problems of curriculum reconstruction and those who are anticipating committee work in this field. This work is conducted under seminar or individual guidance and the hours for the conferences will, therefore, be arranged personally between the student and the instructor. (INTEGRATION 504A or INTEGRATION 548 is prerequisite to this course.)

Credit: 2 semester-hours

*INTEGRATION 505. *Organization and Administration of Extra-Curricular Activities*

The first part of this course considers such general problems of extra-curricular activities as: their growing importance; their relation to the curriculum; the principles underlying their organization, administration, and supervision; and methods of financing. In the second part, an intensive study is made of the home room, the assembly, the student council, clubs, athletics, school publications, and other activities in which the class is especially interested.

Credit: 2 semester-hours

INTEGRATION 508. *Supervision of Instruction in Secondary Schools*

This course emphasizes the more practical phases of supervision which are met most frequently by those engaged in it. Among the topics are: the set-up for adequate supervision, supervision as encouraging and guiding the growth of teachers and the improvement of educational procedures, the supervisory functions of teachers' meetings, discussion groups, general and professional reading, the writing of articles, co-operative curriculum modification, utilization of community resources, and teacher intervisitation.

Credit: 2 semester-hours

INTEGRATION 510. *Seminar in Secondary Administration and Supervision*

In this course the class makes an intensive study of administrative and supervisory problems suggested by the educational events and trends of the year, by the interests and responsibilities of the members of the class, and by educational movements in New Jersey and the country. Each student does an individual piece of research which he reports to the class. This represents advanced work which depends upon previous study or experience in educational administration or supervision. (Prerequisites: INTEGRATION 502 or 601A, and 508 or 601B.)

Credit: 2 semester-hours

INTEGRATION 517. *Administration of the Elementary School*

This course analyzes and evaluates the administrative duties and relationships of the elementary school principal. Particular consideration is given to: building management, effective use of the school plant, sanitation, health service, the library, personnel management, the administration of the curriculum, community relationships, and publicity.

Credit: 2 semester-hours

INTEGRATION 518. *Supervision of Instruction in the Elementary School*

This course has been planned for those engaged in the supervision of the elementary school, and for those who are preparing for such responsibilities. Principles of classroom supervision are developed and applied to learning situations. Among the more important topics that receive attention are: the nature and function of supervision, the organization necessary for effective supervision, the nature and significance of the teacher's purposes, the methods and techniques of group and individual supervision, the technique of observation, and the supervisory conference.

Credit: 2 semester-hours

INTEGRATION 520. *Principles of Mental Hygiene*

This course is designed to be a general survey of the principles and practices of mental health with special reference to the mental health of teacher and pupil. It involves a thorough grounding in fundamental principles of mental hygiene with much practical consideration of the mental-health values of instructional programs and procedures. Discussion centers in practical efforts to develop wholesome personalities in our schools.

Credit: 2 semester-hours

INTEGRATION 521A. *Educational and Psychological Measurement in Guidance*

This course deals with fundamentals of educational and psychological measurements in guidance: test theory, statistical concepts, test construction, evaluation, and interpretation. The place of tests in the instructional program is stressed.

Credit: 2 semester-hours

INTEGRATION 521B. *Psychological Tests in Guidance Programs*

This course is designed to familiarize the student with various psychological tests and scales that may be used in guidance programs in the secondary school. The student is given practice in administering many types of group tests. This includes scoring the tests and evaluating the results, with a discussion of ways in which these results may be used. Much time is spent in actual laboratory demonstrations of tests, giving students an opportunity to serve as subjects and as examiners. Class discussion is based upon first-hand information gained through use of the tests, on readings, and on class reports.

Prerequisite: INTEGRATION 521A

Credit: 2 semester-hours

INTEGRATION 529. *Field Work in Guidance*

The aim of the course is to introduce the student to various aspects of guidance through experience in agencies actually dealing with such problems. Students observe and participate in activities of the agencies to which they are assigned and write full accounts of these observations and experiences. Some time is spent in discussing and evaluating these experiences and relating them to the literature of the subject. Prerequisites are: experience in teaching; familiarity with the literature on all aspects of guidance and mental hygiene; and INTEGRATION 500B, 520, and 551. This work is conducted by seminar and individual guidance. The hours for the conferences are arranged personally by student and instructor.

Credit: 4 semester-hours

INTEGRATION 530A. *Corrective and Remedial Reading in Secondary Schools*

This course offers an investigation and interpretation of the reading problems which are found in secondary school classes. A study is made of the causes of reading difficulties, methods of diagnosis, and techniques of remedial and corrective teaching. Particular attention

is given to the selection and adaptation of suitable curriculum materials. Guidance is given to teachers with individual case problems of retarded, normal, and superior pupils. Illustrative material is taken from case studies developed by classroom teachers.

Credit: 2 semester-hours

INTEGRATION 530B. *Workshop in Corrective and Remedial Reading in Secondary Schools*

This course is designed for students who are directing or instituting programs of remedial and corrective reading and for those who are teaching individuals and classes in such programs. For the most part each student works intensively on his own teaching problem, receiving suggestions and recommendations as the work progresses. Some topics of common interest are: diagnosis, remediation, evaluation, organization and administration of reading programs; use and cost of materials and equipment; relation to the rest of the educational program of the school.

Prerequisite: INTEGRATION 530A or the equivalent, or considerable experience in remedial work

Credit: 2 semester-hours

INTEGRATION 532. *The Supervision and Teaching of Reading in Elementary Schools*

The place of reading in the entire elementary school program is analyzed. Attention is given to necessary remedial work for junior high school students. Materials and their use in instructional programs are studied with a view toward increasing power. All growth levels are considered. Good first teaching is of primary concern; however, the analysis and correction of certain reading difficulties constitute an important portion of the course.

Credit: 2 semester-hours

INTEGRATION 534. *Community Resources for Guidance*

This course deals with the various agencies, industries, and institutions available in the surrounding communities for use in guiding students. In addition to becoming familiar with the location and nature of these facilities students learn the techniques for arranging student interviews and visits. Class discussion and personal research are supplemented by field trips.

Credit: 2 semester-hours

INTEGRATION 535. *Vocational Guidance*

This course is intended for counselors in the junior and senior high schools to obtain information about the principles and philosophy of vocational education and the techniques of counseling youths who wish to receive pre-employment training, and for counselors of out-of-school groups who are attempting to make readjustments to occupational life. Attention is also given to guidance techniques for job preparation and readjustment, the matching of educational and personal abilities to job specifications, the effects of social legislation on the employment of youths, and a study of techniques used in determining occupational needs and occupational changes.

Credit: 2 semester-hours

INTEGRATION 536. *Educational Guidance*

This course is concerned with the facilities available for education after high-school graduation, the problem of further training for pupils leaving school before completing high school, and the academic problems of students while in school. A brief survey of colleges and college-admission procedures is made.

Credit: 2 semester-hours

INTEGRATION 537. *Social-Moral Guidance*

This course is concerned with the non-vocational and non-academic personal and social problems of pupils as well as with the development of techniques by which counselors can integrate the pupil's personal life with the mores and customs of society. It also includes a study of the possible services of various community agencies and a study of the counselor's relation to problems of discipline and citizenship education.

Credit: 2 semester-hours

INTEGRATION 538. *Group Guidance and Counseling Activities*

This course is concerned with the various techniques for helping individual pupils and for using group activities including role-playing as a guidance technique. The group activities considered include those of home rooms, activity periods, occupation courses, student field trips, placement follow-ups, college nights, and career days.

Credit: 2 semester-hours

*INTEGRATION 540. *Recreational and Activity Leadership*

It is the aim of the course to furnish each student with practical skills that are of service in dealing with young people of high school age. The practical side is supplemented by a thorough consideration of source material and theory. A partial list of the areas covered in the course follows: how to organize and handle groups, the use of leaders from within the group, indoor games, outdoor games, special hikes, outdoor cooking, camp-fire leadership. Special field trips are provided to observe camps and playgrounds in operation.

Credit: 2 semester-hours

INTEGRATION 548. *Curriculum Construction in the Elementary School*

This course offers an opportunity to review state and city elementary curricula; to discuss the principles of curriculum construction; to collect new teaching materials for the various subjects; and to evaluate, organize, and grade these materials. Teaching procedures in the use of materials are discussed and evaluated in terms of pupil needs, the objectives set up, and the results obtained. This course offers an opportunity to make a special study of the materials and procedures to be used in the supervision of the language arts.

Credit: 2 semester-hours

* INTEGRATION 550. *Child and Adolescent Development*

This course reviews the general characteristics of child and adolescent development: motor and physiological, social, emotional, language, intellectual, and interests and ideals. The influence of home, school, community, and institutional life on child and adolescent development are considered as well as problems of guidance presented by children in the normal course of development and also those presented by deviations from the normal course.

Credit: 2 semester-hours

* INTEGRATION 551. *Principles and Techniques of Guidance*

Topics included in this course cover: philosophy of guidance, history of the guidance movement, the need for guidance presented by children and adolescents. The methods of gathering useful data are studied, and school records, exploratory activities, tests, inventories, the case study approach, occupational information, and occupational data are treated as well as general methods of guidance with special stress on interviewing and counseling of students.

Credit: 2 semester-hours

* INTEGRATION 552. *The Junior College Curriculum*

This course considers admission requirements, required and elective courses, course contents, and supplementary extra-curricular and guidance activities of the junior college. As a background for a consideration of the principles underlying junior college curricula, there is a brief treatment of the beginnings, aims and functions, administrative organizations, and general trends of American junior colleges.

Credit: 2 semester-hours

INTEGRATION 553. *Core-Curriculum and Life-Adjustment Programs in High Schools*

This course concerns two leading educational developments of the last decade after a discussion of their philosophy and historical antecedents. The most significant school programs already adopted to put these developments into practice are presented in detail.

Credit: 2 semester-hours

INTEGRATION 601. *Workshop in Education*

Section A—Organizing and Administering the School

Section B—Supervising Instruction

Section C—Dealing with and Understanding Youth

The workshop course enables the graduate student to devote his time to an educational topic or school problem of current interest to him and to secure the help of the staff, fellow students, and college facilities in pursuing this study. Members of the workshop may meet together to discuss matters of common concern in respect to the current school situation. In addition, the student works independently on his own subject and at times meets with a small group interested in the same area.

In the past, students have worked on topics in such areas as these: problems in administration, guidance programs, extra-curricular activities, school philosophies, problems in supervision, curriculum planning, and community relations. The success of the workshop depends much upon the student knowing what he wants to accomplish in six weeks, the procedure being flexible enough to support his purposes. He must have his proposed problems for study approved by the Director of the Workshop before he enrolls for the course.

The workshop is offered only in the summer session. It is divided into three sections, as noted above. The student may enroll for four semester hours credit or for two, the four calling for two periods of scheduled time in the course daily, the two calling for one period of scheduled time in the course. The student taking the course for two credits enrolls for one of the three fields: A—administration, B—

supervision, or C—guidance. The student taking it for four credits may do all the work in one of these three fields, or he may enroll for two hours credit in one and two in another.

Credit: 2 or 4 semester-hours

INTEGRATION 602. *Seminar in Guidance*

This course is designed to provide a laboratory situation for the exploration and study of the present practices with respect to the three major phases of the guidance program. Usually this seminar is given in conjunction with either Vocational (INTEGRATION 535), Educational (INTEGRATION 536), or Social-Moral (INTEGRATION 537) Guidance. The major portion of the time is spent on field trips, in private investigation, and in research.

Prerequisites: INTEGRATION 551, and have taken or be taking in conjunction one of the courses of major emphasis listed above

Credit: 4 semester-hours

INTEGRATION 603. *Principles and Practices of Research*

The purpose of this course is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student selects a problem and begins the research which will be completed the second semester.

Prerequisite: MATHEMATICS 400 or equivalent

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

Most of the following courses are set up to serve graduate students as well as College seniors. To carry graduate credit, the course in question must be approved by the candidate's adviser. In all instances, INTEGRATION 406, INTEGRATION 409, and INTEGRATION 410 will be accepted as work for either of the two graduate degrees in this department. For a more complete description of these courses see the undergraduate catalog.

INTEGRATION 400A. *Principles and Philosophy of Secondary Education*

This course evaluates educational objectives, techniques, procedures, and organizations in relation to the needs and demands made upon the school by society and by the student.

Credit: 2 semester-hours

INTEGRATION 400B. *Practicum in Secondary Education*

This course follows the student-teaching. It makes use of the teaching problems encountered by the students in the preceding twelve weeks, as well as similar problems reported by students in former years.

Credit: 2 semester-hours

INTEGRATION 406. *Educational Sociology*

This course deals with the application of sociological principles to educational problems. The school is treated as a part of the community, and the various social forces that affect the school and its administration are considered.

Credit: 2 semester-hours

INTEGRATION 407A. *Television in Education Workshop: Programming and Production*

This is a laboratory course designed to develop the techniques, methods, standards, procedures, and criteria pertaining to the special place of television in education. Through the utilization of studio equipment together with the resources of all the academic departments of the college, student potentialities, campus life, and the community, students receive experience in planning, developing, and producing, television programs of educational value. Actual training is given in the use of standard television equipment on campus, and field trips are made to local television laboratories and studios.

Credit: 2 semester-hours

INTEGRATION 407B. *Television in Education Workshop: Classroom Utilization*

This course is designed to give training in the following areas of television education: types of programs best suited for classroom use; practical applications of programs emanating from commercial stations; various subject areas in which television might be used such as language, science, art, social studies, etc.; script writing; co-ordination of program and school schedules; and the possible use of educational television stations and how they best serve surrounding communities. Students are also introduced to the operation of both sending and receiving television equipment so that they may understand program possibilities and limitations.

Credit: 2 semester-hours

INTEGRATION 408. *Selection and Utilization of Audio-Visual Materials*

Sources, selection, and evaluation of audio-visual aids are studied in this course. Techniques in developing individual reference catalogs of audio-visual aids are stressed.

Credit: 2 semester-hours

INTEGRATION 409. *Radio and Sound Equipment in the Classroom*

This course trains teachers and school executives in the use of radio programs, amplifying systems, recording equipment, and record players. Actual practice is given in the use of these educational aids. Problems of script-writing, microphone and recording techniques, and program directing are considered.

Credit: 2 semester-hours

INTEGRATION 410. *Teaching Materials Workshop*

This course is for those persons who wish to study advanced problems in the utilization and administration of audio-visual materials. Individual research is stressed, and there is an opportunity to work out individual projects.

Credit: 2 semester-hours

INTEGRATION 411. *Educational Motion-Pictures Workshop*

This course includes various phases of the planning and production of educational motion pictures. Students receive actual experience in scenario writing, costume research, set designing, lighting, photography, editing, and sound recording. During the course an educational film is produced as a class project.

Credit: 2 semester-hours

INTEGRATION 420A and 420B. *The Community Centered School*

This course deals with the development and functions of the school as a community resource. Students assemble and interpret data relating to actual school and neighborhood situations. Consideration is given to the social framework in which the school operates; racial and national minorities; intercultural education; truancy and delinquency; and the discovery and utilization of community resources. The use of school personnel and facilities to deal with racial problems is treated in light of the data assembled.

Credit: 4 semester-hours

INTEGRATION 421A and 421B. *Leadership of Activities and Services in Community Education*

This course is designed to prepare teachers and others to give leadership to community-education activities. Starting with the assumption that the school should serve as a community center, members of the course proceed to learn about the various activities and programs that can be initiated and carried on by the school. Consideration is given to programming, utilization of space and personnel, and care of equipment. Techniques for organizing and directing special programs such as scouting, folk dancing, crafts, field trips, production of films, forums and debates, etc., are included.

Credit: 4 semester-hours

INTEGRATION 422A and 422B. *The Organization, Administration, and Supervision of Programs in Community Education*

This is a workshop type of course which emphasizes the integration of school, social, recreational, and adult education programs. The course presents a survey of current trends in community education as adopted and implemented by boards of education throughout the country. Principles, policies, practices, and problems related to the administration and supervision of community-education programs are surveyed. The following types of programs are considered: summer playgrounds, day camps, after-school centers, evening centers, youth and adult recreation centers.

Credit: 4 semester-hours

INTEGRATION 430. *Techniques for Improving Reading Abilities*

This course deals with the diagnosis and remedial treatment of difficulties in reading. A study is made of the basic principles underlying desirable reading experiences and their application in guiding children to success in learning to read adequately.

Credit: 2 semester-hours

INTEGRATION 440. *Camping Education*

The purpose of this course is to familiarize the students with camping and outdoor education as educational methods utilized by the schools of America. The aims and methods of camping are studied, and consideration is given to the communities that have active camping and outdoor education programs in operation.

When given through the Part-Time Division of the College, a week-end experience at the New Jersey State School of Conservation in the Stokes State Forest is required for credit in this course.

Credit: 2 semester-hours

INTEGRATION 441. *Conservation Education*

This course is designed to give teachers and prospective teachers a background for organizing and teaching conservation on various grade levels. The need for conservation, the various kinds of natural resources, and some of the modern methods for using and renewing these resources are considered. Field trips, laboratory experiences, visual aids, printed materials, and visiting specialists combine to make this a useful introductory course for all teachers.

Credit: 2 semester-hours

INTEGRATION 442. *Practicum in Camp Leadership*

In this course the student has an opportunity to learn the techniques of camp leadership through practical experience, guided group study, and discussion. The practical experience comes through serving as a camp counselor in an actual camp situation.

Credit: 2 semester-hours

INTEGRATION 443. *Practicum in Camping Education and Administration*

This course is designed to provide practical experience in the identification and solution of problems arising in camp administration. Among the phases considered are discussion of current practices at both private and institutional camps, interpretation of educational philosophies and objectives as they relate to camping, finances, personnel selection, waterfront organization, food purchasing, staff supervision, sanitation, health and safety, camp management, records and reports, insurance, kitchen management, maintenance, and other phases of camp administration. Practical application is provided through the techniques used in the children's demonstration camp.

Prerequisite: INTEGRATION 440, *Camping Education*, or the equivalent

Credit: 3 semester-hours

INTEGRATION 444. *Practicum in Conservation Education*

This course is designed to provide teachers and supervisors with a background of experience and knowledge which will enable them to organize and to conduct conservation education programs in their own communities. Using an extensive library of conservation educational material, students formulate teaching units, lists of teaching aids, and projects suitable for use in their own communities. Participation in conservation projects with the children in the demonstra-

tion camp furnishes a practical background for research and discussion.

Prerequisite: INTEGRATION 441, *Conservation Education*, or SCIENCE 412, *Field Studies in Science: Biological*, or SCIENCE 413, *Field Studies in Science: Physical*, or the equivalent

Credit: 3 semester-hours

INTEGRATION 450. *Psychological Foundations of Personality*

This course is concerned with the physical, mental, and cultural bases underlying the formation of the personality of the individual. Emphasis is placed upon the implications for the teacher in developing understanding of the formation and measurement of personality.

Credit: 2 semester-hours

INTEGRATION E460. *Public School Program of Studies*

This title is given to a group of courses designed to meet requests from public school systems desiring help in curriculum reconstruction. Each of the parts of this general course will be given on a cooperative inter-college basis, and taught by specialists in the various fields selected from the faculties of the cooperating State Teachers Colleges. Certificates of credit will be issued by the college sponsoring the work.

- Part I. 460A—Principles of Curriculum Revision
- Part II. 460B—Workshop in Curriculum Revision
- Part III. 460C—Organization and Evaluation of Curricula
- Part IV. 460D—The Social Studies Program of Studies
- Part V. 460E—The Language Arts Program of Studies
- Part VI. 460F—The Science Program of Studies
- Part VII. 460G—Workshop in Materials and Methods of Science Education
- Part VIII. 460H—The Mathematics Program of Studies

These cooperative inter-college courses are provided only when the requests from the public school authorities of the county, municipality, or community are such as to require their use. No undergraduate may elect this course unless he is actively engaged in teaching. Not more than six semester-hours in these courses may apply on a graduate degree at the New Jersey State Teachers College at Montclair.

Credit for each part: 2 semester-hours

INTEGRATION 480. *Field Science for Elementary Teachers*

Working in a natural setting, rather than an artificial laboratory, this course stresses firsthand experience with natural phenomena and suggests what can be done to convey an understanding of these things to the elementary-school student. In developing an understanding of natural resources consideration is given to such areas as rocks and minerals, plant and animal life, astronomy, weather, and all outdoor phenomena, both physical and biological. If desired, collections are made under supervision, and some latitude is provided for individual specialization in some phase of field science. The student needs no formal scientific background for this course. Methods of teaching on the elementary-school level as well as subject-matter content are included. Simple demonstrations, experiments, collections, acquisition of free and inexpensive materials, reference publications, and the most recent methods and trends in field-trip procedure are considered.

Credit: 2 semester-hours

ELEMENTARY EDUCATION COURSES

Although the New Jersey State Teachers College at Montclair is engaged primarily in preparing secondary school teachers, during the present shortage of teachers in the elementary schools it was deemed expedient to offer courses in the field of elementary education for the undergraduates of the college leading toward certification to teach in these subjects. Under certain conditions courses in elementary education may be used for graduate credit. Students should check with their advisers in this connection.

DEPARTMENT OF MATHEMATICS

The primary objective of graduate study in the teaching of secondary mathematics is to meet the needs of a teacher in service. This is done by giving him a richer background in pure mathematics than he acquired in undergraduate study, by acquainting him with important applications of mathematics, and by leading him to make a careful study of current problems in the teaching and supervision of mathematics.

The teacher of secondary-school mathematics who wishes to pursue graduate studies leading to the Master's degree should consult the Head of the Mathematics Department in choosing those courses which best supplement his previous training. Of the thirty-two graduate credits required for the degree, eighteen or more (the exact number depending on the candidate's previous training) must be taken in the Department of Mathematics. In no case is a candidate matriculated for the degree who has not had courses in mathematics at least through differential and integral calculus.

A candidate who does not have a certificate to teach mathematics must have thirty undergraduate credits in mathematics before beginning graduate work. He should consult the Head of the Mathematics Department for advice in planning his work.

The requirements for a Master of Arts degree in the teaching of mathematics are:

REQUIREMENTS IN MATHEMATICS DEPARTMENT

- I. At least 18 semester-hours of graduate courses in mathematics having 500 or 600 numbers are required. Of these credits, at least four semester-hours must be selected from each of these groups of courses:

- A. Pure Mathematics

These courses are designed to give the teacher some acquaintance with certain important fields of higher mathematics. They include MATHEMATICS 503, 504, 511A, 511B, 512, 515, 516, 517, 521, 523, and 524.

- B. Background in Mathematics

These courses supply the teacher with knowledge of the uses of mathematics in other fields of human endeavor and with the extension and generalization of secondary-school mathematics to more advanced topics. Such background information serves as a valuable source of enrichment to the teaching of secondary-school mathematics. The follow-

ing courses are included: MATHEMATICS 505, 509A, 509B, 509C, 510A, 510B, 510C, 528, 531, and 601.

C. Teaching and Supervision of Mathematics

These courses serve to familiarize the teacher with important problems in supervision, with experimental research in the teaching of mathematics, and with current problems in the organization and conduct of classes in secondary-school mathematics. The opportunity thus furnished for discussion of current problems of interest in the world of mathematical education makes it possible for the teacher to make well-considered decisions about courses of study, procedures, and techniques. The following courses are included: MATHEMATICS 501A, 501B, 501C, 506, 507, 529, and 530.

II. *Requirements in the Integration Department*

A. INTEGRATION 503, *Methods and Instruments of Research*, for two semester-hours is required of all students.

B. In addition, four semester-hours must be selected from these courses: INTEGRATION 408, 409, 500A, 500B, 500C, 504A, 505, 521A, 521B, 535, 536, 537, 538, 551, 553.

III. *Elective Courses*

A sufficient number of graduate courses having 500 or 600 numbers must be taken to make up a total of thirty-two semester-hours.

In lieu of four of the required thirty-two credits, the candidate may write a thesis giving the results of some study in the field of mathematics or its teaching. This study must be made after consultation with the Head of the Mathematics Department and under the sponsorship of a member of the mathematics faculty. Plans should be made to have such a study in its final form and approved by the Mathematics Department by March 1st of the year in which the degree is anticipated. The preparation of such a dissertation does not relieve the candidate of any of the required credits in mathematics.

Special permission must be obtained from the Head of the Department to receive credit for courses with numbers under 500.

IV. *Final Examination*

A final examination in mathematics is given all candidates prior to the conferment of the degree. This examination is general in nature and is designed to test the candidate's maturity of thought in mathematics and in the teaching of mathematics.

GRADUATE COURSES

MATHEMATICS 501A. *Administration and Supervision of Mathematics, Part I*

This course is concerned with the problems met in organizing and supervising the teaching of mathematics. There are considered the functions and qualifications of the supervisor of mathematics, in-service training of teachers, demonstration lessons, professional attitude and preparation of teachers, department meetings, selection of texts, current problems, research, and the basis for determining objectives.

Attention is paid to efficient methods of securing mastery of skills, the development of power in problem solving, and the organization of testing programs.

Credit: 2 semester-hours

MATHEMATICS 501B. *Administration and Supervision of Mathematics, Part II*

Particular emphasis is placed on such current problems of the high school as the organization of a four-year course in general mathematics, revision of the present college preparatory course, proposals for revision of, or changed emphasis in, the course in plane geometry, as well as suggestions for including some analytic geometry and calculus in the senior year. Reports of various commissions are also considered.

Credit: 2 semester-hours

MATHEMATICS 501C. *The Teaching of Advanced Secondary School Mathematics*

This course presents the best modern practices in teaching advanced algebra, trigonometry, solid geometry, and analysis in the last two years of the senior high school. Topics include: introducing trigonometry, teaching applications of trigonometry, variations in the sequence of topics, recent trends in the curriculum, the aims of teaching solid geometry, the elimination of certain subject matter and proofs, the use of algebra and trigonometry in solid geometry, making algebra *thinking* rather than *manipulation*, applications of advanced algebra, and the use of the function concept in unifying the mathematical knowledge of the student. A study is made of outstanding experiments in teaching these subjects and methods of adapting the material to the abilities and interests of the students.

Credit: 2 semester-hours

MATHEMATICS 503. *Foundations of Algebra*

Careful consideration is given to the fundamental concepts and postulates which form the foundation of algebra. Upon this basis the development of our number system is traced through the application of algebraic operations. Algebraic analysis supplies the criteria for the possibility of geometric constructions. Also a brief survey is given of the general theory and use of rational integral functions.

Credit: 2 semester-hours

MATHEMATICS 504. *Modern Algebra*

The modern algebraic theories of groups, rings, and number fields are studied. Particular attention is given to polynomials over a field, matrices and determinants, and the properties of linear independence and linear dependence.

Credit: 2 semester-hours

MATHEMATICS 505. *Consumer Mathematics: A Background for Teaching in the Junior High School*

This course aims to survey the field of consumer problems, to display mathematics as a powerful tool in analyzing these problems, and to consider the placement and methods of teaching this material in the intermediate grades and in the junior high school. Some of the topics included are: the cost of raising children; the money value of a man; the cost of owning or renting a home; insurance; pensions and social security; stocks, bonds, and the financial page; the quality and cost of consumer goods; business cycles and indices of business activity.

Credit: 2 semester-hours

MATHEMATICS 506. *Current Research in Secondary Mathematics*

A study is made of the findings of current research studies directly concerned with the teaching of secondary mathematics (grades 7—14) and of studies in the fields of arithmetic or of general education which affect the teaching of secondary mathematics. The effects of these studies on syllabi and on textbooks are also studied.

Credit: 2 semester-hours

MATHEMATICS 507. *The Teaching of General Mathematics*

A study is made of the reports and recommendations affecting courses in general or integrated mathematics in secondary schools and in junior college. Methods of teaching classes in general mathe-

matics are studied when such methods differ from those used in the sequential courses, as well as the variations in subject matter in different courses.

Credit: 2 semester-hours

MATHEMATICS 509A. *A Critical Interpretation of Mathematics in the Senior High School, Part I*

An opportunity is here offered for an investigation and interpretation of the algebra and geometry of the secondary school. The meaning and use of secondary mathematics are stressed, rather than the methods of teaching. Among the topics discussed are: algebra as a thought process and not a mechanical operation, types of thinking in algebra and geometry, fundamental laws of arithmetic, algebra as generalized arithmetic, geometrical interpretation of algebra, the function concept in algebra and geometry, the changing scope and subject-matter of Euclidean geometry, limits and incommensurables, and integration (i. e., correlation and fusion) of all secondary mathematics.

Credit: 2 semester-hours

MATHEMATICS 509B. *A Critical Interpretation of Mathematics in the Senior High School, Part II*

Among the topics discussed are: the development and use of the limit concept in secondary mathematics; the introduction of analytic geometry and calculus; the geometry of space; permutations and combinations; the elements of probability and statistics. The subject matter is adapted to the secondary level and treated from the professional viewpoint.

Credit: 2 semester-hours

MATHEMATICS 509C. *A Critical Interpretation of Mathematics in the Junior High School*

The aim of this course is to give teachers a deeper insight into the subject-matter usually taught in the seventh, eighth, and ninth grades. Among the topics considered are: the nature of graphs, an intuitive and experimental approach in geometry, the arithmetic and algebra for social use and interpretation, approximate measures and mensuration, and integration with other subject fields. The course is open to all junior and senior high school teachers and those elementary school teachers who have had two years of high school mathematics.

Credit: 2 semester-hours

MATHEMATICS 510A. *Mathematics in its Relation to Other Fields of Knowledge: Social Sciences*

This course examines some of the fundamental topics that are common to both mathematics and social studies and considers the integration of these topics in the secondary school curriculum. Topics studied include: measurement in social science; presentation of social data; use of index numbers; distribution of wealth and income; concept of utility; supply and demand curves; break-even charts; theory of interest and investment; probability and expectation, insurance, social security, and pensions; analysis of time series and business cycles.

Credit: 2 semester-hours

MATHEMATICS 510B. *Mathematics in its Relation to Other Fields of Knowledge: Science, Art, and Music*

In this course there are introduced such topics as mechanics and vector analysis, wave motion, geometrical optics, weather forecasting, mathematics in biology, chemistry, medicine, and geology; phyllotaxis (leaf arrangement in plants), spirals, laws of growth; static and dynamic symmetry, perspective, designs; and mathematics in music. Many of these topics should serve to enrich the background of secondary school teachers and encourage further study in special fields.

Credit: 2 semester-hours

MATHEMATICS 510C. *Mathematics in its Relation to Other Fields of Knowledge: Geography, Astronomy, and Navigation*

An opportunity is here offered for mathematics teachers to become acquainted with the mathematics of mapping, astronomy, and navigation closely related to the algebra, solid geometry, and trigonometry taught in high school. A study of spherical geometry and trigonometry leads to topics in mathematical astronomy and geography, and to navigation. The discussion includes such topics as: latitude and longitude; time and the calendar; map projections; the making of star maps; sizes and distances of the sun, moon, planets, and stars; weighing the earth and moon; and relativity.

Credit: 2 semester-hours

MATHEMATICS 511A. *Foundations of Geometry*

A careful study is made of the fundamental postulates and basic principles underlying Euclidean synthetic and projective geometries. Past and present trends in this field and the resulting modifications

are considered in connection with the historical background of each. Finally, the development of the subject is briefly traced through certain fundamental groups of associated theorems and their generalizations.

Credit: 2 semester-hours

MATHEMATICS 511B. *Non-Euclidean Geometry*

The development of Hyperbolic-Non-Euclidean and of Elliptic Non-Euclidean geometry is carefully traced. A brief survey of the historical development of each is given. This course is designed for teachers and students of mathematics who desire a better perspective of the field of geometry.

Credit: 2 semester-hours

MATHEMATICS 512. *Methods of Approximation*

This course deals with the determination of functions from observed experimental data. Among the topics considered are: finite differences, symbolic operators, differencing, interpolation formulae, the Gamma function, and the Euler-MacLaurin formula. The course is designed to show the nature of mathematics as an applied science.

Credit: 2 semester-hours

MATHEMATICS 515. *Differential Equations*

This course is a continuation of the calculus considered from a new view-point. Various applications of differential equations and their standard methods of solution are fully treated in this course. Among the topics included are: linear differential equations of the first degree and of the first and higher orders, linear equations of the n th order with constant coefficients, linear equations of the second order, exact and total differential equations, simultaneous equations, numerical approximation, and partial differential equations.

Credit: 2 semester-hours

MATHEMATICS 516. *The Theory of Functions*

This course gives an introduction to the theory of functions of real and complex variables. This includes the properties of: continuity, differentiability, integrability, line integrals, Green's Theorem, Cauchy's Integral Theorem, and other general properties of analytic functions.

Credit: 2 semester-hours

MATHEMATICS 517. *The Theory of Numbers*

This course offers a systematic treatment of certain fundamental properties of numbers. It includes such topics as: properties of integers; prime numbers; composite numbers; factorization; relatively prime numbers; properties of congruences and their solutions; fundamental theorems of Fermat, Euler, Wilson, Gauss, etc.; primitive roots of a congruence; quadratic residues; and certain types of Diophantine equations.

Credit: 2 semester-hours

MATHEMATICS 521. *Analytical Mechanics*

The fundamental basic principles of this course are Newton's laws of motion, whose applications and consequences are carefully considered in the study of such topics as: the composition and resolution of forces, the statics of a particle and of a rigid body, forces acting upon a body, friction, straight line motion, curvi-linear motion, work and energy, moment of inertia, etc. The need and usefulness of mathematics for the explanation of physical phenomena are clearly shown.

Credit: 2 semester-hours

MATHEMATICS 523. *The Theory of Probability*

In this course the applications of the theory of probability to life insurance, statistics, mechanics, and genetics are stressed. Special attention is paid to the implications of probability in secondary school mathematics, and to the teaching of probability in the senior high school. The ideas of choice in combinations and permutations are developed. The intuitive ideas and the classic paradoxes in the historical development of the theory are also considered. Additional topics considered are: continuous probability, the normal probability curve, and geometric probability. It is assumed that students taking this course have an understanding of college algebra and the elementary ideas of calculus.

Credit: 2 semester-hours

MATHEMATICS 524. *Statistical Inference and Sampling Theory*

In this course the student considers the planning and execution of a statistical study. Among the topics considered are: moments and moment generating functions; binomial, Poisson, and normal distributions; the general theory of sampling; student's distribution; chi-square distribution; analysis of variance and co-variance; statistical

control; and the design of experiments. The development of statistical reasoning is an important aim of the course. Applications are given to industrial, scientific, and social data.

Prerequisite: MATHEMATICS 408

Credit: 2 semester-hours

MATHEMATICS 528. *Mathematics Materials for Student Activities and Club Programs*

This course analyzes some of the large amount of material available for individual and club activities in mathematics. Mathematical recreation, plays, topics for essays or club programs, and popular books on mathematics are studied. The material considered varies from elementary arithmetical recreations for the elementary school to topics involving advanced mathematical ideas. Topics considered are: recreations; arithmetical, geometrical, and logical problems in arrangement, polyhedrons and crystallography, classical problems of antiquity, cryptography, magic squares, topological and unicursal problems.

Credit: 2 semester-hours

MATHEMATICS 529. *Curriculum Construction in Mathematics*

This course is conducted as a workshop or seminar in constructing curricula in mathematics. The chief objective of the course is cooperation with those communities which are planning changes in their courses of study. Among the topics considered are: the selection of aims, a study of recent courses of study in mathematics, the reports of various commissions, and other research pertinent to the questions at issue.

Credit: 2 semester-hours

MATHEMATICS 530. *Mathematical Materials and their Applications in the Teaching of Mathematics*

In this course the student considers the adaptation and use of multisensory materials to motivate and improve the teaching of high school mathematics. Particular attention is given: to the equipment needed for the modern mathematics laboratory and how it may be used effectively; to plans for the extra-curricular activities in mathematics, such as mathematics clubs and assembly programs; to such visual aids as pictures, lantern slides, motion pictures, and bulletin board exhibits; and to the books, periodicals, and pamphlets needed for the school and the teacher's library.

Credit: 2 semester-hours

MATHEMATICS 531. *Survey of Higher Mathematics*

The principal aim of this course is to give the student some insight into the nature and content of various fields of higher mathematics. This includes a discussion of the basic structure and framework of the following branches of higher mathematics: foundations of logic, higher algebra and algebraic theories, theory of groups, synthetic and analytic projective geometries, differential geometry, N-dimensional geometry, topology, vector analysis, and calculus of variations.

Credit: 2 semester-hours

MATHEMATICS 601. *Workshop: Current Problems in the Mathematics Field*

This course is conducted as a workshop for the solution of such actual problems in the teaching of mathematics as: courses in mathematics for the general and for the specializing student; integration of mathematics with other courses; revision of subject-matter in particular fields, such as in plane geometry; and research problems in specific units of work. The class meets for conferences, reports, and lectures. Individual conferences between the instructor or consultant and each individual member of the class are held by appointment.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

MATHEMATICS 401. *The Teaching of Mathematics in Secondary Schools*

The student studies the methods of teaching the different units of work in the junior and senior high school. He accompanies this study by observing in the College High School the ways in which these methods are put into practice.

Credit: 3 semester-hours

MATHEMATICS 402. *Applications of Mathematics*

The student is taught how to use and adjust those modern instruments of precision which can be used to motivate the teaching of mathematics in the junior and senior high school. Included among these are the slide rule, transit, sextant, planimeter, plane table, solar

telescope, and astronomical telescope with equatorial mountings. Such early instruments as the astrolabe, hypsometer, baculum, and optical square are also considered.

Credit: 4 semester-hours

MATHEMATICS 404. *Readings and Lectures in Mathematics*

Lectures are given upon advanced topics in mathematics and on those phases of mathematics which are finding new applications, especially as they are related to the secondary field.

Credit: 2 semester-hours

MATHEMATICS 405. *The History of Mathematics*

A cultural background in the field of elementary mathematics is furnished by this course. Emphasis is placed on the history of the development of the number systems of elementary mathematics, computational devices, mathematical symbolism, space concepts, and simple logical processes.

Credit: 2 semester-hours

MATHEMATICS 406. *Solid Analytic Geometry*

A review and extension of the theory of determinants, a study of lines and planes in space, of space coordinates, transformation of coordinates, loci in space, the sphere, and of quadric surfaces are considered in this course. The study of the general quadratic equation in three variables, invariance under motion, and the classification of numerical equations completes the course.

Credit: 2 semester-hours

MATHEMATICS 407. *Advanced Calculus*

A study of continuity, the theory of limits, the generalized theorem of the mean, and its extension to series with a remainder term is made in this course.

Credit: 2 semester-hours

MATHEMATICS 408. *An Introduction to Elementary Mathematical Statistics*

This first course covers the usual topics in statistics using calculus as a major tool in the derivation of formulæ.

Credit: 2 semester-hours

MATHEMATICS 410. *Mathematics of Finance*

This course introduces the student to the elementary theory of simple and compound interest and leads to the solution of practical problems in annuities, sinking funds, amortization, depreciation, stocks and bonds, installment buying, and building and loan associations.

Credit: 2 semester-hours

MATHEMATICS 411. *Field Mathematics*

In this course the student learns how to make a map using the alidade and plane table and how to find heights and inaccessible distances by scale drawings. Simple devices for estimating heights and distances are taught. The use of the surveying transit is explained as well as the use of simple devices, easily made, such as the hypsometer and geometric square. A knowledge of the elementary processes in arithmetic is sufficient background for this course. This course may not be taken for credit by a student who has received credit for MATHEMATICS 402.

Credit: 2 semester-hours

DEPARTMENT OF SCIENCE

The teacher of secondary school science is faced constantly with the problem of maintaining his professional competence with respect to recent advances in the fields of science and science education.

The past two decades have brought forth an astonishing array of new discoveries in biology, chemistry, physics, and other branches of science. Entirely new scientific points of view have to be considered by a teacher who wishes to keep his classroom practices up to date with the most recent findings as reported in current newspapers, magazines, and books.

The unusual growth of enrollment in secondary schools has brought the science teacher numerous difficult problems of science education which require a more scholarly background than has been necessary in previous decades. It is clear that the demands to be made upon the science teacher in the near future will greatly exceed those of any previous decade. A thorough knowledge of science and secondary education is necessary to professional success and promotion.

Other factors operate to multiply the problems of high school science teachers. The rapid growth of work in science in elementary schools and the extraordinary growth of junior high school science preparation foreshadow a fundamental reorganization of the senior high school science program. This work is now well under way in many sections of the country. The courses offered here are designed to help the science teacher meet these changing needs.

Prior to matriculation in the Science Department for the Master of Arts degree the student should complete a subject matter background of thirty semester-hours of college science distributed in the areas of biology, chemistry, and physics. Deficiencies must be made up prior to the conferment of the A. M. degree. A minimum of eighteen semester-hours of graduate credit work in science is required. SCIENCE 401 and SCIENCE 404 will not be accepted toward meeting this eighteen semester-hour departmental requirement. The student's work program is prepared in cooperation with the science adviser. Any changes in the student's work program are made only with the written approval of the science adviser.

COURSE REQUIREMENTS FOR THE A. M. DEGREE IN SCIENCE

I. *Integration Requirements*

Each student must take INTEGRATION 503, *Methods and Instruments of Research*, and four additional semester-hours in Integration courses.

II. *Science Requirements*

A. The candidate must complete three or four semester-hour courses from among the following:

Biology	402, 407, 408, 409, 509
Chemistry	405, 406, 407, 408, 411, 412, 508, 509
Physics	402, 405, 406, 407, 408, 409, 411, 510
Science	405, 410

12 semester-hours

B. The candidate may elect three to four semester-hours from among the following:

Biology 501, Chemistry 501, Science 401D

C. The candidate may elect up to six semester-hours from among the following:

Biology	412, 413, 414, 508
Chemistry	413
Physics	513
Science	411, 412, 413, 414, 415, 416

Minimum for B and C—6 semester-hours

D. The candidate must take SCIENCE 505, *Science Seminar for Junior and Senior High Schools*.

2 semester-hours

E. With the consent of his adviser, the candidate may elect from among Science courses, Integration courses, or other courses on the 400-500 level.

Maximum possible for E—6 semester-hours

BIOLOGY

GRADUATE COURSES

BIOLOGY 501. *The Teaching of Biology in Secondary Schools*

This is a seminar and research course designed to give opportunity for study of the best methods and practices being used in the teaching of secondary school biology. Major topics of discussion are: aims of secondary school biology, course content, functions of textbooks, testing, laboratory exercises and demonstrations, and the collection and use of suitable and available laboratory materials. A study is made of recent research studies in the field of biology teaching.

Prerequisite: 16 semester-hours of work in biology

Credit: 3 semester-hours

BIOLOGY 508. *Social Applications of Biology*

This field-study course offers to teachers of science an opportunity to gain first-hand knowledge of the uses made of biological principles in industry and in modern laboratories. Field trips are designed to cover such varied interests as public health and hospital routine laboratories, medical botanical research laboratories, and the inspection of model industries developing biological products.

Prerequisite: 12 semester-hours of work in biology

Credit: 4 semester-hours

BIOLOGY 509. *Field Studies of Flowering Plants*

The emphasis of this course is placed upon the methods of identification of higher plants and the ecological factors affecting the growth and development of these plants. Plants in their winter conditions are considered first. As the season progresses, the emphasis changes from the identification of woody to herbaceous forms. Plant communities of various types are observed, and the factors influencing their development are discussed. Field trips are taken to such typical habitats as the Pine Barrens, Troy Meadows, Raritan, and others. The preparation of herbaria is stressed, and techniques for making leaf and twig collections are demonstrated.

Prerequisite: General botany

Credit: 4 semester-hours

BIOLOGY 402. *Mammalian Anatomy and Histology*

A study is made of the gross structure of a typical mammal and of the structural peculiarities of its various tissues. This course prepares the student for the study of human physiology.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 407. *Comparative Embryology*

A study is made of the stages in development and factors influencing the development of different types, particularly the vertebrates. Students in this course follow carefully the development of the chick through the earlier stages.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 408. *Biological Technique*

This course is designed to furnish the prospective teacher of biology with the technical details necessary to enable him as a secondary school teacher to handle successfully biological materials and experiments and demonstrations in which these materials are employed.

Prerequisites: 8 semester-hours of work in zoology and 4 semester-hours of work in botany

Credit: 4 semester-hours

BIOLOGY 409. *Human Physiology*

A study is made of normal and abnormal physiology based on previous study of mammalian anatomy. In addition to an analysis of the part played by organs and tissues in carrying out the essential functions of the body, special attention is given to problems of hygiene and sanitation.

Prerequisite: A course in vertebrate anatomy or BIOLOGY 402

Credit: 4 semester-hours

BIOLOGY 412. *Genetics from Mendel to Lysenko*

This course considers the scientific basis of the gene concept and its support in experiment from Mendel's work to the present allegations of the Lysenko school. Documents of some of the milestones in the history of the science are studied, and the adherence to scientific method is carefully noted. The wide uses of the science in plant and animal improvement and the discoveries related to man's heredity make an integral part of the study. The course helps the teacher of biology or social studies to discriminate between what is scientifically known and what is political philosophy in genetics. Laboratory exercises supplement lectures and discussion.

Prerequisite: A course in college biology

Credit: 2 semester-hours

BIOLOGY 413. *Economic Botany*

The discussion of the importance of plants and plant life to the world in general and to man in particular is the principal aim of this course. The economic importance of bacteria, fungi, and other lower plants is considered as well as that of the seed plants. The student should have a knowledge of general botany for an understanding of this course.

Prerequisite: One year of general botany

Credit: 2 semester-hours

BIOLOGY 414. *Field Ornithology*

New Jersey is one of the best areas in the East for the study of bird life. On the Montclair campus, alone, over 130 species have been seen. This course deals primarily with the identification and natural history of birds. A variety of habitats receive attention so that one can become acquainted personally with the habits and associations of this unusually well adapted vertebrate type. In addition, analysis is made of the place of birds in the lives of humans, the migration story, and methods of attracting and protecting birds.

Prerequisite: A year of biology or the equivalent

Credit: 2 semester-hours

CHEMISTRY

GRADUATE COURSES

CHEMISTRY 501. *The Teaching of Chemistry in Secondary Schools*

This course satisfies the requirements in the teaching of chemistry for the limited secondary certificate. A study is made of the objectives, recent trends, methods of presentation, courses of study, lesson planning, instructional aids, and subject matter of high school chemistry.

Prerequisite: 16 semester-hours in chemistry

Credit: 3 semester-hours

CHEMISTRY 508. *Advanced Organic Chemistry—Biochemistry*

In this course a study is made of the composition of living organisms, their nutritional requirements, their mechanism for promoting and regulating chemical action, and their metabolism of foods. A laboratory study is made of the components of foods, enzyme action, isolation of proteins, etc., blood and urine analysis.

Prerequisites: CHEMISTRY 405 and 406, organic chemistry

Credit: 4 semester-hours

CHEMISTRY 509. *Advanced Inorganic Chemistry*

This course offers opportunity for intensive and systematic study of the elements in the light of the periodic classification. Selected theories and principles of inorganic chemistry and some of their applications are studied in detail. A study is made of compounds. Directed use of chemical literature is an important part of this course. Individual experimental work in the laboratory consists chiefly of preparation and purification of inorganic compounds and testing for impurities.

Prerequisite: A course in quantitative analysis

Credit: 4 semester-hours

CHEMISTRY 510. *Food Inspection and Analysis*

A study is made of the composition of commercial food products, the laws governing purity and marketing of foods, methods of analysis of foods and cosmetics, and the judging of foods for quality.

Prerequisites: Organic chemistry and quantitative analysis

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

CHEMISTRY 405. *Organic Chemistry, Part I*

The course covers the chemistry of carbon compounds and gives increased facility and experience in manipulating complicated chemical apparatus. It treats of the role of chemistry in life processes, including the synthesis and adaptation of carbon compounds in industry, in medicine, and in daily living. The first semester's work covers the chemistry of simple chain compounds and includes fats and carbohydrates.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry

Credit: 4 semester-hours

CHEMISTRY 406. *Organic Chemistry, Part II*

The work of this course covers the chemistry of multiple functional chain compounds, the ring compounds, vitamins, hormones, and the application of these compounds in industry, in foods, and in medicine.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry

Credit: 4 semester-hours

CHEMISTRY 407. *Advanced Quantitative Analysis*

This course is adapted to the needs and preparation of students. The student, after consultation with the instructor, may select analyses from the following: general or special types of oxidation-reduction; gravimetric methods; colorimetric methods; use of organic reagents in analyses; electrometric titrations; conductimetric titration; spectrographic methods of analysis; electrodeposition of metals; and special methods of analysis.

Prerequisites: General college physics and one semester of quantitative analysis, or special permission of the instructor

Credit: 4 semester-hours

CHEMISTRY 408A. *Industrial Chemistry, Part I*

The purpose of this course is to enable science teachers to understand the type of chemical industries in the State of New Jersey and the nature of their problems. A survey is made by lectures, reports, and trips to plants of the chemical industries in the State. This section of the course stresses the importance and the characteristics of chemical industries, the various unit operations used by the industries

to carry out chemical reactions, the controls used to insure quality, organization for research, and the type of workers employed.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 408B. *Industrial Chemistry, Part II*

This course is a study of the chemical industries of the metropolitan area utilizing the methods outlined in CHEMISTRY 408A. Also, a study is made of the economics of chemical industry, chemistry and industry in general, and the effects of chemical discoveries upon living conditions.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 411. *Physical Chemistry, Part I*

This course, the first half of a year's work in physical chemistry, deals with gases, liquids, crystals, physical properties and electrolytes, colloids, thermochemistry, and homogeneous and heterogeneous equilibria.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry, CHEMISTRY 202, analytical chemistry, and PHYSICS 101 and 102, general college physics

Credit: 4 semester-hours

CHEMISTRY 412. *Physical Chemistry, Part II*

This course deals with electrical conductance, electrolytic equilibrium, electromotive force, electrolysis, polarization, chemical kinetics, photo-chemical reactions, atomic structure, molecular structure, and radioactivity.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry, CHEMISTRY 202, analytical chemistry, and PHYSICS 101 and 102, general college physics

Credit: 4 semester-hours

CHEMISTRY 413. *Atomic Structure and Atomic Energy*

This is a lecture course designed to familiarize the student with a modern conception of the structure of matter and to acquaint him with some significant aspects of atomic energy. Some of the topics studied include the following: discoveries leading to knowledge of the struc-

ture of the atom; isotopes; nuclear fission; nuclear reactions; chemical versus atomic explosions; the chain-reacting pile; production of plutonium; detection and measurement of nuclear radiation and incendiary effects of atomic explosions; atomic energy for peace-time uses; radioactive isotopes in agricultural, biological, and chemical research; and availability of materials for atomic energy.

Prerequisites: General college chemistry and general college physics, or special permission of the instructor

Credit: 2 semester-hours

PHYSICS

GRADUATE COURSES

PHYSICS 510. *Advanced Problems in Photography*

This course is intended to meet the needs of the camera club teacher and the hobbyist. The course includes negative and positive alterations, toning, printing processes, studio portraits, color photography, and photomicrography. The student is expected to submit prints of exhibition quality for public showing.

Prerequisites: General college physics, general college chemistry, and a first course in photography

Credit: 4 semester-hours

PHYSICS 512. *Modern Physics*

This course is a survey of recent experimental research in physics and of the newer theories concerning nuclear physics and electricity. Such topics as atomic spectra, radioactivity, artificial transmutation of the elements, and cosmic rays are discussed.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 513. *Nuclear Radiation*

A study of the nature of radiations is made. Particular attention is made to radiation measurement technique. The course is concluded with a study of health physics as related to radiation dosages and their effects. Some attention is paid to disposal of radioactive wastes, radiation protection, and safety precautions.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

PHYSICS 402. *Advanced Electricity*

The most important aims and purposes of the course are as follows: (1) to provide a substantial background of training in the fundamental laws and principles governing the generation and use of electricity; (2) to develop skill in manipulating laboratory and demonstration apparatus; and (3) to learn the basic principles of alternating current circuits.

Prerequisites: PHYSICS 101 and 102 and CHEMISTRY 101 and 102

Credit: 4 semester-hours

PHYSICS 405. *Light and Optical Instruments*

Topics included for study in the classroom and laboratory are: the propagation of light; emission and absorption of radiant energy; reflection, refraction, polarization; spectrum analysis; photometric measurements; photoelectric cells; measurement of high temperatures; characteristics of illumination, modern illuminants; and industrial and domestic uses of light.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 406. *Astronomy*

The course consists of a study of the fundamental principles of the science of astronomy. Such topics as the following are considered: motions of the earth; time; the moon; law of gravitation; the planets; comets; meteors; the sun; evolution of the solar system; the constellations; distances and motions of the stars; spectrum analysis; and telescopic observations.

Prerequisites: General college physics and college chemistry

Credit: 4 semester-hours

PHYSICS 407A. *Aviation, Part I*

This course deals with the historical development of aviation, air traffic rules, airworthiness regulations, pilot certification, types of aircrafts, aircraft structures, principles of aerodynamics, lift, drag, stability, motions of an airplane, piloting, motorless flight, and aircraft engines. Flight experience is made available as a part of this course.

Prerequisite: General college physics

Credit: 2 semester-hours

PHYSICS 407B. *Aviation, Part II*

This course continues the study of the topics considered in PHYSICS 407A and also develops an understanding of power performance, propellers, engine instruments, and flight instruments. Flight experience is made available as a part of this course.

Prerequisite: General college physics

Credit: 2 semester-hours

PHYSICS 408. *Advanced Aviation*

This course consists of the study of navigation; meteorology as applied to flight operations; radio communications; flight and navigational radio aids; instrument flights; jet, turbojet, and rocket flight; and recent advancement in aviation.

Prerequisite: PHYSICS 407

Credit: 4 semester-hours

PHYSICS 409. *Introduction to Radio Communication*

This course deals with direct and alternating current circuits; construction and operation of detectors; characteristics of audio and radio frequency amplifiers; vacuum tubes; and comparisons of amplitude modulated and frequency modulated transmission and reception.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 411. *Photography*

This course consists of laboratory work and field work supplemented by lectures and demonstrations. Emphasis is placed on physical principles in the construction of cameras, projection printers, tanks, and filters. Special attention is given to chemical principles in the development of films and paper, toning, intensification, and reduction.

Prerequisites: General physics and general chemistry or permission of the instructor

Credit: 4 semester-hours

SCIENCE

GRADUATE COURSES

SCIENCE 505. *Science Seminar for Junior and Senior High Schools*

This course is designed to afford opportunity for graduate students in science, supervisors, and science teachers: (1) to investigate research in science education; (2) to organize science experiences and science information with teaching materials for the public schools. Each member of the group selects a project. This project must be presented to the science faculty and graduate students for evaluation.

Prerequisite: Certification to teach science or matriculation for the A. M. degree in science

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

SCIENCE 401D. *The Teaching of Aviation in Secondary Schools*

This course covers the study of State aviation programs, texts, bulletins, free material for school use, demonstration equipment, tests, working models, visual aids, and references needed to teach aerodynamics, aircraft engines, meteorology, navigation, and aircraft communication in high schools. Field trips to airports and aviation industries are included.

Credit: 2 semester-hours

SCIENCE 404. *Problems in the Teaching of Science*

When a student has completed the assignment in student-teaching in a public high school in the State of New Jersey and has accumulated some experience with the problems of high school science instruction, he returns to the college campus for an intensive study of a limited number of problems in a single field of science.

Prerequisites: See the undergraduate bulletin for required courses in biology, chemistry, and physics

Credit: 2 semester-hours

SCIENCE 405. *Field and Laboratory Studies in Science*

This integrated course is designed to show the relationship in the geological rock formations, the types of soil, water patterns, plant communities, and animal inhabitants in northern New Jersey, and the effects on human occupations. The field trips are for the purpose of gathering data and materials for intensive work in the labora-

tory. The experiments are designed to give the student acquaintance with the science of common but possibly unstudied features of the landscape; e. g., soils are reproduced in profile and examined microscopically, physically, and chemically; water from a variety of sources is tested for biological and chemical impurities; the census of plant and animal inhabitants of typical areas is associated with relevant factors in the environment. Discussions precede and follow the field and laboratory work to establish the probable history of the area and to suggest the probable trend, whether advancing or retrogressing, of its development. Stress is placed on the kinds of human control in specific communities which would best serve their progress.

Students are asked to submit an analysis of the geological and biological features of some known community, based on the skills and principles learned. Some other objectives of the course include an understanding of the organization of school museums for learning purposes, the making of ecological maps and illustrating them with photographs and diagrams, and the techniques of ecological field trips. Two instructors, a chemist and a biologist, collaborate in giving this course.

Prerequisite: Proficiency in biology and chemistry

Credit: 4 semester-hours

SCIENCE 410. *Junior High School Science Demonstrations*

This course covers the methods of experimental instruction in grades seven, eight, and nine. A detailed study is made of about three hundred demonstrations.

Prerequisites: General college chemistry, college physics, and a course in general biology

Credit: 4 semester-hours

SCIENCE 411. *Problems in Field Studies in Science*

In this course each student selects a phase of field science in which he does advanced research under the guidance of the instructor. Plant ecology, bird-life, pond life, fungi, tree diseases, and insect life are a few of the areas from which the student may choose.

Prerequisites: SCIENCE 405, Field and Laboratory Studies in Science, or its equivalent plus at least 12 points in biology

Credit: 2 semester-hours

SCIENCE 412. *Field Studies in Science: Biological*

Extensive instruction in the identification and natural history of fauna and flora is given in this course. Students examine the ecology of plant and animal communities (terrestrial and aquatic) and relate such communities with man's use of natural resources. The relation of field activities to present school curricula is considered. No previous science courses are required.

Credit: 2 semester-hours

SCIENCE 413. *Field Studies in Science: Physical*

Emphasis in this course is given to local and New Jersey geology, minerals, soils, and waters, with emphasis on the chemical and physical aspects of soil and water. Field trips are taken through the Kittatinny Mountains and to the Delaware Water Gap.

Credit: 2 semester-hours

SCIENCE 414. *Conservation of Plants and Animals*

The social, economic, and ecological implications of plant and animal conservation are considered together in this course. Discussion periods are interspersed with field trips to forests and wildlife management areas. Co-operating experts from State and Federal agencies bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 415. *Conservation of Soil and Water*

The social, economic, and ecological implications of soil and water conservation are considered together in this course. Discussion periods are interspersed with field trips to selected areas. Outside experts bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 416. *Problems in Conservation*

In this course, a student or a group of students selects a phase of conservation in which he or the group does original research, either at the School of Conservation or within New Jersey. The research may be done any time during the summer with the approval of the instructor. This course is intended primarily to encourage individ-

uals or groups from institutions of higher learning in New Jersey to use the School of Conservation as a base for research in conservation. Enrollment is limited and subject to advanced approval. Fees are determined by the number of hours of credit allowed and the number of days or weeks spent in research.

Credit: To be determined by length of stay and nature of problem

SCIENCE 417. *Science Problems in Conservation*

This course is designed for students who already have a background in science and who wish to organize units of instruction dealing with conservation problems in their own immediate environment. By utilizing experts, the rich environment of the camp, and the library resources each student can prepare materials dealing with the relation between science and conservation, suitable for use with pupils in the schools of New Jersey.

Credit: 2 semester-hours

SCIENCE 418. *Three Centuries of Science Progress*

This course includes a study of fundamental world changes that have resulted in the past three hundred years from scientific discoveries. Topics considered are the following: a background of the beliefs and practices of the age; the processes of thought which produced skepticism; the experiments devised to disprove ruling opinions; the new concepts arising from fresh evidence; and the social, economic, and philosophic adjustments following the discoveries. Stress is given to the nature of scientific inquiry, its cumulative nature, its desire for freedom, and how to judge the probable fruitfulness of a research problem. The role which the man of science occupies in the world today is contrasted with his counterpart in earlier centuries. Class demonstrations of historical experiments, readings in the original literature, and lectures and discussions are employed by the three or more science teachers of the course.

Credit: 2 semester-hours

DEPARTMENT OF SOCIAL STUDIES

The teacher of social studies works in a field the boundaries of which are constantly changing and expanding. The necessity for constant study, especially with regard to the contemporary social situation and its problems, presses upon every secondary school teacher of the social studies. The Social Studies Department at Montclair intends to provide for such teachers courses of an advanced character which will help to keep them abreast of the changes in a changing world. It also will provide advanced courses for those teachers who wish to increase their preparedness in specialized secondary school subjects. Finally, it aims to provide for the teacher-in-service an opportunity for keeping informed concerning the changing techniques and problems of teaching the social studies. Selections from advanced courses of the sort just described lead to the Master's degree in the social studies.

In order to qualify for the Master's degree in social studies, candidates will either prepare a thesis or pass an oral examination based upon a selected field of research.

REQUIREMENTS IN THE SOCIAL STUDIES DEPARTMENT

In general, a candidate must offer thirty-two hours of graduate credit, at least eighteen of which must be in the field of Social Studies, six in the field of Integration, and six or eight (depending upon the number of social studies credits required) elective credits in fields closely related to the social studies. The following are the more specific requirements:

- I. All candidates must take a seminar course, either SOCIAL STUDIES 502 or SOCIAL STUDIES 518. A candidate *may* offer both these seminars since the subject-matter content, aside from the instructions in research, is different in both courses.
- II. The remaining social studies courses should represent a diversified choice from among the following fields:

Ancient and Medieval History

Social Studies 421, 422, 423, 425, 426, 427, 473

Modern European History

Social Studies 414, 420, 441, 448, 457, 458, 493, 506

United States History

Social Studies 408, 413, 419, 438, 447, 471, 474, 475, 480

The Americas

Social Studies 415, 417, 435A, 435B, 440A, 440B, 453A, 453B

International Affairs

Social Studies 412, 434, 442, 451

Economics

Social Studies 446, 450A, 450B, 456, 517, 522, 523, 524

Sociology

Social Studies 429, 439, 443, 444, 455, 476, 477, 479, 494

Political Science

Social Studies 402A, 402B, 407, 430, 433, 437, 515

Philosophy

Social Studies 404, 470, 478

Educational Techniques

Social Studies 401, 472

Credits may also be chosen to the amount of six from the offerings in Field Studies, China Institute, Workshop in Citizenship Education, and United Nations Institute.

- III. All candidates must take the course, *INTEGRATION 503—Methods and Instruments of Research*, and four elective credits chosen preferably from the following:

Integration 500B, 504A, 505, 550, 440

- IV. Elective credits in fields other than the social studies should be chosen from among the following:

Integration 408, 410

English 402, 404, 432, 438, 442A, 442B, 447, 450

Business Education 409, 412, 407A, 407B

Geography 406, 408A, 408B, 409, 410, 411, 412, 413, 414A, 414B, 416, 418, 419, 420, 503, 504, 509.

- V. *Master's Thesis or Research Paper*

All candidates are required to complete either a Master's thesis or a Master's essay on a question or problem which has been chosen by the candidate for his specialization. The candidate is given an oral examination on the paper before a seminar of members of the Social Studies Department. Complete directions for this requirement may be obtained from the head of the department.

In the case of candidates offering undergraduate majors from institutions other than Montclair, it may be necessary to make more specific requirements with respect to choices among social studies and elective credits than is indicated above in order to fill gaps which may exist in the undergraduate major.

GRADUATE COURSES

SOCIAL STUDIES 502. *The Origin and Development of the American Constitution*

This course is an intensive study of the origin and framing of the Constitution of the United States. It aims to search out the roots and influences that determined our basic political institutions. The seminar method is employed and attention is given to the techniques of historical research and historical writing.

Credit: 2 semester-hours

SOCIAL STUDIES 506. *The British Empire from 1783*

This course deals with the evolution of the British Empire from the period of the old Colonial system to the present British Commonwealth of Nations. The rise of dominion government, the forces of anti-imperialism, and the various solutions suggested from the improvement of imperial relations are stressed.

Credit: 2 semester-hours

SOCIAL STUDIES 515. *History of Political Thought*

The major theories of representative political philosophers concerning the nature, functions, organization and sovereignty of the state are studied in this course. Among those discussed are: Plato, Aristotle, Cicero, Thomas Aquinas, Machiavelli, Luther, Calvin, Bodin, Hobbes, Locke, Spinoza, Montesquieu, Rousseau, Hume, Bentham, J. S. Mill, Burke, Hegel, Marx.

Credit: 2 semester-hours

SOCIAL STUDIES 517. *Money and Banking*

An opportunity is provided for an analysis of the monetary and banking principles and practices basic to modern economic organization. Consideration is given to the various theories of money, the relation of money to prices, banking systems and their operation, and the nature and significance of credit. Special attention is directed to an examination of the functioning of the Federal Reserve System in relation to the gold standard, a managed currency, stability, inflation and deflation.

Credit: 2 semester-hours

SOCIAL STUDIES 518. *Recent Trends in American History (1918 to the present)*

Without attempting to reach final conclusions, this course analyzes the major problems which have influenced American life since the First World War. The new position of the nation in world affairs, the modifications of the old economic order, the progress of social and political change are all surveyed. While the treatment is historical, it is intended to present materials which are serviceable in teaching the Problems of American Democracy.

Credit: 2 semester-hours

SOCIAL STUDIES 522. *The Development of Economic Institutions and Ideas*

This course deals with the changing principles, institutions and ideas which determine the character of economic society. The doctrines of the more important schools of economic thought such as the Classical, Historical, and Institutional groups are emphasized, and the teachings of the Mercantilists, Physiocrats, Adam Smith, Malthus, Ricardo, Marx, Henry George, Veblen, Hobson, Commons, Keynes, and others are examined in relation to the important problems of money, credit, prices, business cycles, foreign and domestic commerce, property, wages, the nature of wealth and value, and economic planning.

Credit: 2 semester-hours

SOCIAL STUDIES 523. *The Economics of the Business Cycle*

The purpose of this course is to consider the nature of business cycles and their impact on the national economy, to survey business cycle theories, and to analyze the significant proposed methods of control for the purpose of developing a desirable public program conducive to economic stability.

Credit: 2 semester-hours

SOCIAL STUDIES 524. *The Economics of Public Fiscal Policy*

This is a course for the mature student interested in the effect of government tax policies on the national economy. Consideration is given to the various theories of justice in taxation: the incidence and shifting of the tax burden; the constitutional aspects of government finance; fiscal policy and full employment; taxation and economic inequality; the economics of public borrowing; and management of the national debt. Particular emphasis is placed on the conflicting issues which have arisen from the increasing encroachment of public

finance on both business and the consumer due to war and recurrent depressions. Attention is also given to such special programs as the Marshall Plan and aid to underdeveloped economic areas.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions see the undergraduate catalog.

ANCIENT AND MEDIEVAL HISTORY

SOCIAL STUDIES 421. *Oriental Civilization*

This course presents the important contributions to civilization and social progress made in antiquity in three great centers of the Near East: Egypt, Mesopotamia, and Crete.

Credit: 2 semester-hours

SOCIAL STUDIES 422. *Greek Civilization*

The aim of this course is to present the development of Greek civilization from the earliest period to the beginning of the Christian era.

Credit: 2 semester-hours

SOCIAL STUDIES 423. *Roman Civilization*

This course traces the social changes in Rome from the earliest times to the end of the Western Roman Empire. The rise and fall of the empire are discussed with relation to their importance in medieval civilization.

Credit: 2 semester-hours

SOCIAL STUDIES 425. *Medieval Civilization*

This course covers the period from the decline of Rome to about 1500. It first emphasizes the blending of barbarian cultures with that of the Roman resulting in feudalism as a way of life. After that a study is made of the gradual evolution of towns, a trade and industrial economy on a broadening scale, the emergence of monarchical states, an intellectual awakening with the founding of universities, all of which leads finally to our modern system of national states.

Credit: 3 semester-hours

SOCIAL STUDIES 426. *Medieval History to 1498*

In the first part a study is made of the factors contributing to the political breakdown of the imperial principle, such as the growth of Christianity, barbarization of the West, and the expansion of Islam. The second part is devoted to the developments in Western Europe after 1200, stressing political movements, medieval commerce, guilds, growth of towns, and cultural changes.

Credit: 4 semester-hours

SOCIAL STUDIES 427. *Ancient History to 378 A. D.*

The first part of this course covers the Oriental period and the Greek through the Periclean Age. The second part covers the Hellenistic period from the rise of Philip of Macedon, stressing attempts at federalism.

Credit: 4 semester-hours

SOCIAL STUDIES 473. *The Arts in Western Civilization*

This course is designed to show how the social, economic, political, and religious movements in Western Civilization influenced the aesthetic expression of Europe from the Golden Age of Greece to the Rise of the Industrial Revolution. Greek, Roman, Byzantine, Gothic Baroque, and Rococo art, architecture, and music are discussed and illustrated.

Credit: 2 semester-hours

MODERN EUROPEAN HISTORY

SOCIAL STUDIES 414. *Modern England*

This course deals both with the historical periods as such and with the influences of the political, economic, and social forces in the English literature of the century. The Napoleonic era, political reform, factory reform, the humanitarian movement, the Irish question, the ministries of Gladstone and Disraeli, and the interpretation of politics and literature are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 420. *European Outlook*

This course is designed to provide the background for understanding Europe today. The reality of ideological struggles between free and totalitarian countries is emphasized as a main source of present-day conflict.

Credit: 4 semester-hours

SOCIAL STUDIES 441. *Economic History of Europe*

The study of Europe from an economic point of view is particularly important in the light of present European problems and their relation to world-wide conditions. This course is a survey of the economic life and development of Europe from the emergence of the ancient civilizations to the beginning of the modern economic world.

Credit: 2 semester-hours

SOCIAL STUDIES 448. *The British Dominions*

This course deals with the role Canada, Australia, New Zealand, and South Africa are playing in present world affairs. Special emphasis is given to Canada and its dual position as an American state and a part of the British Empire.

Credit: 2 semester-hours

SOCIAL STUDIES 457. *Development of Russia*

Factors which have shaped the evolution of the Russian people, such as Byzantinism and the Greek Orthodox faith, the Synod, Tartar state organization, the Mir, Westernization from Peter to Lenin, Slavophilism, and dialectic materialism, are emphasized.

Credit: 2 semester-hours

SOCIAL STUDIES 458. *Russia as a World Power*

An analysis of Russia's relations with China, Iran, Turkey, the European continent, England and the United States is presented. Marxist world policy, as interpreted by Kautsky, Plekhanov, Jaures, Bukharin, Trotsky, Lenin, and Stalin, is described.

Credit: 2 semester-hours

SOCIAL STUDIES 493. *Western Europe Since World War I*

This course presents an outline of the rise of communism and fascism and the reaction of the western democracies to these movements. The Civil War in Spain, the Munich Pact, the failure of the League of Nations, diplomatic events of the World War II era, United Nations problems, the North Atlantic Pact, and special problems of western defense are emphasized. An evaluation of western Europe's significance for the United States is attempted.

Credit: 4 semester-hours

UNITED STATES HISTORY

SOCIAL STUDIES 408. *A History of New Jersey*

This course is designed to assist teachers in acquiring a better knowledge of their state. A study is made of the history of New Jersey from the point of view of the social, political, economic, and cultural development of the people from the beginning of settlement to the present. Special attention is given to the geographical and industrial aspects of the state, and the place of New Jersey in the national setting.

Credit: 2 semester-hours

SOCIAL STUDIES 413. *Economic History of the United States*

The great trends and movements in agriculture, finance, commerce, manufacturing, transportation, and industrial relations are traced from their beginnings in the colonial period to their contemporary expressions in the present crisis.

Credit: 2 semester-hours

SOCIAL STUDIES 419. *American Political Biography*

This is the study of the life and influence of the leading figures in American political and social history. It is the aim here to show the relation of each of these characters to the times in which he lived and to point out how he influenced the trend of American life. The study includes such leaders as Washington, Jefferson, Hamilton, Webster, Lincoln, Cleveland, T. Roosevelt, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 438. *The Literature of American History*

A brief description of the material available for the study of American history is followed by class practice in finding and using the primary sources of some of the facts commonly taught in schools.

Credit: 2 semester-hours

SOCIAL STUDIES 447. *Diplomatic History of the United States*

The purpose of this course is to show how we have become gradually conscious of our world interests and responsibilities, and the important role we have come to play in international politics.

Credit: 2 semester-hours

SOCIAL STUDIES 471. *The United States Since World War I*

This course surveys the major problems, economic, social, political, and international, which have marked our national development since the end of the first World War. It is intended especially for social studies seniors as a preparation for the second year of secondary school American history as provided for in the recently adopted state requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 474. *America in Transition*

This course surveys rapidly the results of the Civil War and then emphasizes the major trends, economic and social, which have made modern America. It is intended as a more advanced study than that which is made in the undergraduate course. The period covered is from 1867 to around 1914.

Credit: 2 semester-hours

SOCIAL STUDIES 475. *The History of American Thought*

This course considers the influential thinking in America from the Mayflower Compact to the Marshall Plan to see how certain ideas or trends of thought have grown out of situations and have in turn helped to mould the course of our history. The student should gain an appreciation for the American contribution to world culture, and an examination is made of outworn stereotypes which exist today. The writings and discourses of important American thinkers are considered including Mather, Paine, Jefferson, Emerson, Thoreau, and Veblen.

Credit: 2 semester-hours

SOCIAL STUDIES 480. *Social History of the United States*

This course presents a study of the social and cultural aspects of American history. As such, it supplements but does not take the place of economic and political history. The course considers population movements and growth, rural and urban social problems, status of women, family life, utopian ventures, mass media of communication, amusements and recreation, and human rights.

Credit: 2 semester-hours

THE AMERICAS

SOCIAL STUDIES 415. *Latin-American Relations of the United States*

This course aims to provide the information necessary to a clear understanding and accurate appreciation of the political, economic, and social relations that have developed between us and our Latin-American neighbors.

Credit: 2 semester-hours

SOCIAL STUDIES 417. *American Archaeology*

This course shows that the New World of the early discoverers was in reality far from new. The course discusses the prehistoric pueblo dwellers and early mound builders. The truly remarkable civilizations of the Mayas and the Incas are examined and compared with that of the Aztecs. North American tribes of Indians are also studied in order to evaluate their significant cultures.

Credit: 2 semester-hours

*SOCIAL STUDIES 435A. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part I*

This course deals specifically with the relations of the United States and the Caribbean countries. Attention is given to the dependencies of the United States in this region as well as to the independent republics. Twentieth century political, economic, and cultural developments of this region are stressed in light of the inter-American system.

Credit: 2 semester-hours

*SOCIAL STUDIES 435B. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part II*

This course deals specifically with the twentieth century political, economic, and cultural life of the South American nations. The role which the South American states play in world affairs is stressed. Attention is given to post-World War II developments and adjustments in South America.

Credit: 2 semester-hours

*SOCIAL STUDIES 440A and 440B. *The Development of Central and South America as Colonies and Nations*

The first part of this course surveys the period of exploration and settlement in the colonies of South and Central America. The second

* Note: Courses 435A, 435B, 440A, and 440B are independent courses; none is prerequisite for another.

part studies the experiences of the various Latin-American nations under different forms of government.

Credit: 2 semester-hours each

SOCIAL STUDIES 453A. *The Development of Mexico and the Caribbean States*

It is intended to show in this course the historical development of Mexico and the Caribbean nations in terms of their political, cultural, social, and economic progress in order to develop understandings and appreciations for their cultures and present-day problems. The relationships of their problems to those of the other American nations are stressed and placed in proper perspective.

Credit: 2 semester-hours

SOCIAL STUDIES 453B. *The Development of Canada*

This course is devoted to the study of the historical background, geographical environment, governmental organization, economic behavior, and social conditions of the northern neighbor of the United States. Its professional objective is to provide the understanding and appreciation necessary to the student and teacher who may follow and interpret the growth, internal and external, of the Dominion of Canada and of its relation to the United States as well as to the British Commonwealth of Nations.

Credit: 2 semester-hours

INTERNATIONAL AFFAIRS

SOCIAL STUDIES 412. *International Government*

The attempts of the international community of states to express itself in a formal world organization are the subject of this course. The agencies which have been established to deal with international legislative, executive, administrative, and judicial problems are studied.

Credit: 3 semester-hours

SOCIAL STUDIES 434. *Contemporary World Affairs*

This course is devoted to a survey of the leading diplomatic, economic, political, and military issues before the world today. The backgrounds from which these international affairs have evolved are reviewed.

Credit: 2 semester-hours

SOCIAL STUDIES 442. *The Far East*

A study is made of the economic, social and cultural situation of the Far East, with particular emphasis on the historical background of China and Japan, and on our relations with the Philippines.

Credit: 2 semester-hours

SOCIAL STUDIES 451. *The Middle East*

This course is a survey of Indian and Moslem civilizations. Post-war planning for the region from the Near East through Persia, India, Burma, Thailand, and Malaya to the Netherland East Indies is discussed.

Credit: 2 semester-hours

ECONOMICS

SOCIAL STUDIES 446. *Current Problems in Economics and Government*

This course is designed to analyze the relationship of economics to government. The causes and results of governmental activities are discussed in the light of their economic significance and their bearing on public welfare.

Credit: 2 semester-hours

SOCIAL STUDIES 450A and 450B. *Modern Economic Problems and Policies*

The purpose of this course is to contribute to the general need for increased knowledge in the area of economic relationship, using the problem approach method of analysis. 450A begins with a brief recapitulation of the overall functioning of the economic system, after which the class proceeds to a detailed study of our broader economic problems and the public policies relating to them. Specifically, the problems are those relating to population and natural resources, the economic functions of government, the measurement of economic activity, monetary stability, basic banking problems, business cycles, marketing trends, economic inequality, and social security. 450B considers those problems associated with the world economy, international trade and exchange, monopoly and its regulations, the problems concerned with the control of public utilities, emergency price regulation and economic stabilization, labor problems, the problems of public finance, the public debt and fiscal policy, and, finally, the nature of comparative economic systems and their relations with each other.

Credit: 4 semester-hours

SOCIAL STUDIES 456. *International Economic Relations*

The purpose of this course is to study the significance of international trade and exchange to the economic life of our nation and to the world economy.

Credit: 2 semester-hours

SOCIOLOGY**SOCIAL STUDIES 429. *Present-Day Social Problems***

Beginning with a survey of levels of living in the United States and their relation to the distribution of wealth and income, this course proceeds with a study of poverty and crime, their sources, treatment, and prevention.

Credit: 2 semester-hours

SOCIAL STUDIES 439. *The Family and Its Problems*

This course gives a history of the family, our American family patterns, the effects of social change, marital patterns of interaction, social roles, sources of conflicts and frustration, divorce and desertion, special problems in family life, economics of children and the home, social legislation pertaining to family problems, marital adjustments, personality change after marriage, parent-child relationships, and personality reorientation.

Credit: 2 semester-hours

SOCIAL STUDIES 443. *Youth and the Community*

This course is a sociological study of youth in its many relations to the community. Special attention is given to problems which arise in the relationship of youth and the community; e. g., juvenile delinquency, conditions contributing to maladjustment, poorly adjusted children, and educational and social agencies active in solving youth behavior.

Credit: 2 semester-hours

SOCIAL STUDIES 444. *The Social Bases of Human Relations*

This course emphasizes the social bases of human nature and personality. Primary and secondary groups, folkways, mores, and institutions are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 455. *Social Legislation*

This course analyzes the social, economic, and political adjustments which have come about in our society due to technological progress.

Credit: 2 semester-hours

SOCIAL STUDIES 476. *Personality Development and Group Relations*

A study is made of personality growth through social contacts, the environmental factors found in the home and family, neighborhood, play, and school groups. Methods of measuring the place of the individual in the group, analysis of the group process, ways of bringing about better life adjustment, and integrating experiences are the subject matter of the course. Concrete cases of maladjustment to society and disintegrated personality are studied. Agencies in the community which serve youth are visited, and leadership in community group activities is recognized as part of the course requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 477. *Rural Sociology*

During this course the student comes face to face with rural life in northern New Jersey. Social processes and problems are considered. Opportunities are provided for students to attend Grange meetings, county fairs, rural dances and parties, and to live for a day or two with a farm family.

Credit: 2 semester-hours

SOCIAL STUDIES 479. *Education and Intercultural Relationships*

Within our nation as within the world, along with common needs and interests, there exist differences between groups and individuals which act as barriers to satisfying human relationships. This course is devoted to a consideration of these barriers and of common interests and needs which exist in spite of such barriers. We study not only the existence of such conditions but also the attitudes, principles, and techniques which may make for better human relationships.

Credit: 2 semester-hours

SOCIAL STUDIES 494. *Social, Economic, and Geographic Implications of Conservation*

Everyday problems of living as they are related to and affected by the wise use of our natural resources are studied in this course. The student learns about the renewable resources, soil, water, forests, and wildlife, as well as the non-renewable resources, minerals, oil, and coal. Economic, social, community, national, and individual problems are approached by giving the student first-hand experiences gained through extensive field trips in northern New Jersey. This course is of particular interest to social studies and elementary school teachers but also forms an excellent experience background for all educational fields. Methods of teaching, courses of study, and teaching units are developed.

Credit: 4 semester-hours

POLITICAL SCIENCE

SOCIAL STUDIES 402A and 402B. *American and Comparative Government*

The basic facts and principles necessary for the teaching of civics, history, and the political aspects of Problems of American Democracy are studied. The first part is devoted to American national government, including the obligations and rights of citizens, the suffrage, political parties, the changing nature of the Federal system, and the executive, administrative, legislative, and judicial systems. The second part deals with similar political phenomena in England, France, Germany, Italy, and Russia.

Credit: 2 semester-hours each

SOCIAL STUDIES 407. *New Jersey State and Local Government*

A study is made of the State Constitution; New Jersey's place in the Federal system; the rights and duties of citizens; suffrage; political parties; the legislative, the executive, and administrative systems; the courts, the law enforcement and correctional systems; revenues and expenditures; public health, educational, highway, and other services; county and municipal government; and other local political units.

Credit: 2 semester-hours

SOCIAL STUDIES 430. *The Citizen and the State*

This course is designed to help any citizen become better acquainted with the many organizations by and through which our complex society manages itself. The emphasis is placed on government and

political organizations, but the course also includes a study of the many other organizations of the community, the county, and the state that have to do with directing policy and maintaining controls. The aim of the course is to encourage intelligent appreciation and participation rather than simply to accumulate academic information. Consideration is also given to the ways in which such working knowledge can become a part of the experience of the pupils in our schools.

Credit: 2 semester-hours

SOCIAL STUDIES 433. *American Political Thought*

This course deals with contemporary trends and theories as they have emerged from social and economic conditions and as they are founded upon the bases laid down by such men as Hamilton, Madison, Washington, Jefferson, Marshall, Calhoun, Webster, Lincoln, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 437. *The Political Party System in the United States*

Among the topics discussed are: party organizations, the political boss, the political machine, party finances, the process of voting, election laws, primaries, conventions, platforms, presidential elections, majority rule, the development of the party system, sectional politics, the farm vote, the labor vote, and the future of party government in the United States.

Credit: 2 semester-hours

PHILOSOPHY

SOCIAL STUDIES 404. *The Philosophy of History*

It is the purpose of this course to investigate the relation of history to the other social studies and also the major attempts to find the meaning of history. A brief survey is made of the leading philosophies of history.

Credit: 2 semester-hours

SOCIAL STUDIES 470. *History and Principles of Philosophy*

This course presents a study of the history of philosophy and of the important principles contributed by outstanding philosophers from Thales to Gentile. Much of the discussion is centered on the three types of philosophic thought: naturalism, idealism, and pragmatism.

Among the philosophers considered are: Plato, Aristotle, Bacon, Spencer, Rousseau, Hegel, James, Dewey, and Gentile.

Credit: 2 semester-hours

SOCIAL STUDIES 478. *Theories of Social Justice from Antiquity to Our Time*

This course is designed to show how specific ideas of social justice resulted from specific historical conditions and events. A comparison of social upheavals among the ancient Hebrews, Greeks, and Romans; the early Christians; the peasants in the Middle Ages; the religious rebels of the early Renaissance; and the revolutionaries of the modern age is to furnish background material for an understanding of present social thought. Lectures and discussions cover the social prophets of the Hebrews; Lycurgus; Cleomenes; Plato; Gracchus; Spartacus; the Essenes, the Waldensians, the Albigensians, and the Hussites; Wycliffe; John Ball; and on selected social thinkers of the last few centuries, such as Hobbes, Locke, Hume, Rousseau, the Utopians, the Socialists, and the Anarchists.

Credit: 2 semester-hours

EDUCATIONAL TECHNIQUES

SOCIAL STUDIES 401. *The Teaching of the Social Studies in Secondary Schools*

This course aims to present recent tendencies in educational method in teaching the social studies. A program is presented containing the correlation of subject-matter organization in socialized recitation, the teaching of current events, projects in citizenship, and the use of the project-problem as a method of teaching history and civics.

Credit: 3 semester-hours

SOCIAL STUDIES 472. *Modern Social Studies Instruction and Supervision*

This course is designed primarily to assist teachers and supervisors to obtain a comprehensive view of recent curriculum trends, current subject-matter tendencies, and newer practices in secondary school social studies. Topics discussed include: materials, methods, and techniques; use of audio-visual aids; courses of study and experimental problems; professional literature; and problems of the critic teacher and the supervisor.

Credit: 2 semester-hours

FIELD STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 459. *New Jersey and the Metropolitan Community*

This is a sequel to SOCIAL STUDIES 302 and consists of an entirely different series of field studies. There are eight all-day field trips and seven two-hour class periods. The course is given on Saturdays, during both semesters when possible, and is open to all regular and part-time students as an elective. The field studies in the course cover comprehensively the geography of New Jersey and the lower Hudson valley with emphasis on the conservation of natural resources. Attention is also given to the cultural pattern of the region.

Credit: 3 semester-hours

SOCIAL STUDIES 460. *Central Eastern Region*

This fifteen-day tour of Pennsylvania, Maryland, Virginia, West Virginia, North Carolina, and Tennessee covers the major points of historic interest associated with the Colonial Period, the American Revolution, and the Civil War, and the geographic features of the coastal plain, the Piedmont, the Great Valley, and the Appalachian Mountains in these states. Travel is by modern chartered motor coach, and overnight stops are made at first-class hotels. Among the places visited are: Valley Forge, Philadelphia, Baltimore, Annapolis, Washington, Arlington, Alexandria, Mt. Vernon, Fredericksburg, Richmond, Washington's birthplace at Wakefield, Lee's plantation at Stratford, Yorktown, Williamsburg, Jamestown, Raleigh, Chattanooga, Asheville, Great Smoky Mountains, Norris Dam, Jefferson's Monticello at Charlottesville, Natural Bridge, Sky-line Drive in the Shenandoah National Park, Luray Caverns, Winchester, Harper's Ferry, Frederick, Gettysburg, and the Pennsylvania Dutch area around Lancaster and Ephrata.

Credit: 3 semester-hours

SOCIAL STUDIES 461. *New England and French Canada*

This field study course gives an opportunity to study by direct observation the historical and geographical features of New England and the Province of Quebec. The trip, occupying the twelve days immediately following the summer session, is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers the lower Connecticut Valley, including Hartford, Springfield, Northampton, and Deerfield; the Rhode Island cities of Providence and Newport; historic Massachusetts towns such as

Plymouth, Boston, Lexington, Concord, Salem, and Marblehead; the coast of New Hampshire and southern Maine; the White Mountains in the Mt. Washington and Franconia Notch area; the Canadian Province of Quebec, including the ancient French city of Quebec, Montmorency Falls, St. Anne de Beaupré, Montreal; the western shores of Lake Champlain, Lake George, and the Hudson River. It is an indispensable background for an understanding of Colonial and Revolutionary life and history in this region.

Credit: 3 semester-hours

SOCIAL STUDIES 462. *Continental United States*

This field study course consists of sixty-two days of directed travel, including all of July and August, and provides an opportunity for gaining an integrated view of our country as a whole. The trip is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers about 12,500 miles and visits 26 states and 6 National Parks. Among the major points of interest are Gettysburg, Natural Bridge, Blue Ridge and blue grass region, Mammoth Cave, Lincoln shrines in Kentucky and Illinois, Dodge City, Royal Gorge, Pikes Peak, Denver, Rocky Mountain National Park, Taos and other Indian Reservations, Santa Fe, Petrified Forest, Painted Desert, Grand Canyon, Bryce and Zion National Parks, Hoover Dam, Los Angeles, Hollywood, San Diego, San Capistrano and other Missions, Tia Juana, Santa Barbara, Sequoia and Yosemite National Parks, Monterey, San Francisco, Sacramento, Lake Tahoe, Reno, Donner Pass, mammoth redwood groves, Crater Lake, Columbia River Valley, Portland, Seattle, Mt. Rainier, Grand Coulee Dam, Spokane, Butte, Yellowstone National Park, Salt Lake City, pioneer trails of Wyoming, Black Hills, Chicago, Detroit, Toronto and Niagara Falls. All important geographic and historical features are studied under the instruction of members of the college faculty and local specialists. Write for detailed descriptive folder.

Credit: 10 semester-hours

SOCIAL STUDIES 463. *The Lower South*

This is a fifteen-day field study course, covering the gulf coasts of Louisiana, Mississippi, and Alabama, and both coasts of Florida. Among the topics to be observed and studied are the Acadian and Creole culture in and around New Orleans; the industrial, historical, and recreational features of Biloxi, Mobile, and Talahassee; the tobacco, citrus, and sponge-fishing industries in the neighborhood of Tampa, St. Petersburg, Lake Wales, Sarasota, and Fort Myers; the

plant and animal life of the Everglades along the Tamiami Trail; the millionaire playgrounds of Miami and Palm Beach; and the historical shrines of America's oldest city, St. Augustine. It is usually offered during the Christmas holidays.

Credit: 3 semester-hours

SOCIAL STUDIES 464. *Southeastern Region and Gulf Coast*

This is a twelve-day field study course covering the Atlantic Coast from Baltimore to Savannah and the Gulf Coast from Tallahassee to New Orleans. It surveys the economic, geographic, and historical aspects of the coastal plain, the piedmont, and the lower Mississippi Valley visiting, among other places, Richmond, Williamsburg, Charleston, Savannah, Tallahassee, Pensacola, Mobile, Biloxi, New Orleans, Baton Rouge, Natchez, Vicksburg, Jackson, Birmingham, Atlanta, Greenville, Charlotte, and Greensboro. It is offered during the Christmas holidays.

Credit: 3 semester-hours

SOCIAL STUDIES 465. *The Border States*

This is a nine-day field study course covering mainly the states which were border or frontier states during the early stages of the westward movement or border states between the North and the South during the Civil War. The route of the trip will be down the eastern shore of Delaware and Maryland to Williamsburg, up the southern shore of the James River to Appomattox and across the mountains to Natural Bridge; then down the Great Valley to Knoxville and the Norris Dam, westward to Nashville, north again to Mammoth Cave, the Lincoln Memorial, and the Blue Grass Country of Kentucky, up the Ohio River through the land of iron and steel to Pittsburgh, and finally homeward across the Appalachians by way of the Pennsylvania Turnpike.

Credit: 2 semester-hours

SOCIAL STUDIES 466. *Puerto Rico and the Virgin Islands*

This is a nine-day field study course devoted to a survey of our nearest island possessions. It includes a rather thorough exploration of San Juan and its vicinity, including the University, the rain forest and the submarine gardens, a three-day trip through the island visiting pineapple, coffee, sugar, textile, and rum producing areas, churches, homes, and historic places. One day is spent in St. Thomas, largest of the Virgin Islands. The trip to and from the islands is made by air. It is offered during the Christmas holidays.

Credit: 2 semester-hours

SOCIAL STUDIES 467. *Florida*

This is a field-study course covering the Florida peninsula including both coasts, the Everglades, and the Lake Region. Among the places visited are ancient St. Augustine; the winter playgrounds at Palm Beach and Miami; the Tamiami Trail through the Everglades; the west coast cities of Sarasota, St. Petersburg, and Tampa; and the Lake Region in the neighborhood of Lake Wales and Orlando. The trip affords opportunity for topographical, historical, and industrial studies. It is usually given during the Easter vacation.

Credit: 2 semester-hours

SOCIAL STUDIES 468. *New Jersey, the Lower Hudson Valley, and Eastern Pennsylvania*

This field-study course covers all sections of New Jersey (northeastern, northwestern, central, and southern), the Hudson Valley from Manhattan to Bear Mountain, and southeastern Pennsylvania from Philadelphia to Lancaster and Scranton. Among the activities and places studied are the natural resources, conservation, industries, state and national parks, historic sites and buildings, topographic features, and the manners and customs of the people of each section. There are three one-day field trips and a five-day trip by bus with overnight stops at first-class hotels as well as two days of class work at the college. This course furnishes a series of interesting experiences of especial value to teachers of the history and geography of New Jersey, New York, and Pennsylvania.

Credit: 2 semester-hours

SOCIAL STUDIES 469. *Mexico*

This field-study course aims to give a comprehensive view of contemporary Mexican life with its geographic, economic, historic, and cultural setting. Transportation to and from Mexico City is by air and in Mexico by private cars. Overnight stops and meals are at the best hotels. Places visited include Xochimilco, Acolman, Teotihuacan, Fortin, Puebla, Oaxaca, Tehuantepec, Queretero, Guanajuato, Dolores Hidalgo, San Miguel de Allende, San Jose Purua, Morelia, Toluca, Taxco, and Cuernavaca. The itinerary is carefully planned to include all points of major interest and significance. Special studies may be made in the fields of geography, history, art, architecture, archaeology, sociology, economics, and other fields.

Credit: 3 semester-hours

BACKGROUND STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 492A and B. *Studies in American Life—The East and the West*

These courses comprise a unit designed to give the student an integrated understanding of the United States as a cultural, historic, geographic, social and political unit and, at the same time, an appreciation of the regional differences which characterize American unity in diversity. It should be useful to those who have traveled, to those who intend to travel, and to those who, although they cannot travel, wish to broaden their knowledge of our country. The geography, the history, the literature, the art, the music, the architecture, the people, the manners and customs, the flora and fauna, the economic, social, and political problems, and the significant personalities of the regions studied are discussed and illustrated with slides, films, and other audio-visual materials. Either course may be taken without the other.

The subject matter of SOCIAL STUDIES 492A covers New England, the Central East, the South, and the Middle West east of the Mississippi River. The subject matter of SOCIAL STUDIES 492B deals with the regions west of the Mississippi, i. e., the Great Plains, the Mountain States, the Southwest, the Northwest, and California.

Credit: 2 semester-hours each

INSTITUTES AND WORKSHOPS

SOCIAL STUDIES 490A. *United Nations Institute*

This course covers four and one-half hours per day for ten consecutive days excluding Sunday. It consists of basic lectures on factual backgrounds by the instructor, supplementary lectures by visiting lecturers from the United Nations and other organizations, discussions, workshop and library projects, demonstrations of the use of audio-visual materials, and field trips to the United Nations. Included among the subjects studied are the national state system, war and peace, world organizations (past, present, and proposed), the national armaments problem, international law, the international police proposal, pacific methods of settling international disputes, and the outlook for international co-operation.

Credit: 3 semester-hours

SOCIAL STUDIES 490B. *The United Nations and American Foreign Policy*

The purpose of this course is to help provide an understanding of the United Nations in its operation as a basis for American foreign policy. In that the Charter of the United Nations forms the backbone of American cultural, economic, and military cooperation with other nations, its interpretation and the application of our aid to needy people open a wide area of disagreement within the nation. Following the principle that American foreign policy should rest upon an intelligent understanding on the part of the electorate and working within the framework of the policy of the State Board of Education with regard to controversial issues, the United Nations Institute deals with the strong as well as the weak aspects of this newly created world organization. This institute serves the needs of teachers of all grades, students of foreign policy, the public at large, as well as visitors from other lands who are here to study the ways of American democracy. It is available to students who have completed the requirements for SOCIAL STUDIES 490A, *United Nations Institute*, or the equivalent.

Credit: 3 semester-hours

SOCIAL STUDIES 490C. *The Specialized Agencies of the United Nations*

The purpose of this course is to give the student an opportunity to learn about the various activities of the specialized agencies of the United Nations. The course deals with the positive activities of the United Nations in the various areas of human welfare. Visiting lecturers from the agencies themselves and from areas of the world receiving such help are a regular part of the class work. Trips to the New York offices of these agencies and individual research make up the balance of the work for this course.

SOCIAL STUDIES 490A, *United Nations Institute*, or its equivalent is a prerequisite for this course.

Credit: 3 semester-hours

SOCIAL STUDIES 491A. *Workshop in Citizenship Education, Part I*

The purpose of this workshop is to present a study of what has been done in some of the many projects in citizenship education throughout the country. Special emphasis is placed on the plans and materials developed by the Citizenship Education Project now being conducted by Teachers College, Columbia University, and financed by the Carnegie Corporation. Montclair has been one of the eight teachers colleges cooperating in this project, and the College High School is now a cooperating school. Consultants are invited in as needed. Attention is given to programs and practices already in use in the schools, and advantage is taken of the state-wide project

of this past year in collecting from the schools experiences in education for character and citizenship. New means for citizenship education are sought, and methods of evaluation are reviewed. Experience in the group processes essential to democratic action is provided. It is hoped especially to include in the workshop those who have been or may be serving as training teachers for Montclair student teachers, especially in the fields of social studies and English. Principals and administrators who want to join with others in learning how to make more effective the citizenship education in the schools with which they are connected are invited to participate. Each participant in the workshop works on actual plans for carrying out such education in the school and the classroom.

Credit: 2 semester-hours

SOCIAL STUDIES 491B. *Workshop in Citizenship Education, Part II*

Membership in this workshop course is limited to those who have completed SOCIAL STUDIES 491A, and participants in this advanced workshop meet and work with the members of the SOCIAL STUDIES 491A workshop. On the basis of previous experience, each member of the SOCIAL STUDIES 491B group is expected to work out several laboratory practices or similar projects for use in the classroom or the school.

Credit: 2 semester-hours

SOCIAL STUDIES 499. *Introduction to Chinese Culture*

A number of authorities introduce first-year students to the rise, growth, and maturing of Chinese civilization, as well as to the fundamental problems of China today, including the conflict of ideologies. The course is given in twelve days. Each day there are two hours of lectures in the morning; after lunch a period of forty-five minutes is devoted to informal talks including further discussion on Chinese music, philosophy, Chinese school days, festivals, and calligraphy. Some time is also given to the singing of Chinese songs and the showing of motion pictures. During the two-hour workshop period the students prepare their projects, teaching units, and background material under the direction of faculty members.

Credit: 3 semester-hours

SOCIAL STUDIES 496A. *The Chinese Society*

This course is an intensive study of the formation of the Chinese people, their collective life, and the interaction of natural and human forces with the resultant social organizations from early times to the present. Particular emphasis is placed upon the development of social institutions, including the family, labor guilds, educational systems, and religious institutions, as well as their transformation and mod-

ernization under the impact of different forces from the West. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*.

Credit: 3 semester-hours

SOCIAL STUDIES 496B. *China: The Evolution of a Nation*

This course is an intensive study of the Chinese civilization, the forces underlying the development of the national character of the Chinese people, their contacts and conflicts with other peoples and cultures from historical times to the present. Because of its voluminous material, this course does not attempt to cover the whole span of Chinese history, but it is an integrated presentation of the maturing of the Chinese people as a nation. There are twenty-four hours of lectures in the morning, and roundtable discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*.

Credit: 3 semester-hours

SOCIAL STUDIES 497. *Chinese Philosophy*

This course shows how the ancient philosophies, Confucianism, Taoism, Buddhism, Mohism, can be applied to the China of today and how they affect modern Chinese thought. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*, or an equivalent course in philosophy.

Credit: 3 semester-hours

SOCIAL STUDIES 498. *China and the Far East*

This course is given in twelve days, two hours each morning being devoted to the discussion of contemporary Chinese problems and China's relations to her neighbors in the Far East; Japan, India, Korea, the Philippines, and Russia-in-Asia.

Credit: 3 semester-hours

ART 414. *History of Chinese Art*

For a description of this course, see page 113.

Credit: 3 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

For a description of this course, see page 38.

Credit: 3 semester-hours

OTHER COURSES THAT MAY BE USED AS ELECTIVES

For more complete descriptions see the undergraduate catalog.

ART 406. *Creative Arts Workshop*

This course offers experience in painting, drawing, sculpture, ceramics, and print making for students who wish to employ the creative visual arts in the teaching of other subjects. No previous art training is required.

Credit: 2 semester-hours

ART 408. *Creative Painting*

This course gives the student an opportunity to use the materials of the painter for personal creative experience. Oils, water colors, and poster paints are used. The student is encouraged to work in landscape, figure, and free imaginative composition. No previous art experience is necessary.

Credit: 2 semester-hours

ART 414. *History of Chinese Art*

In this course the developments and distinguishing characteristics of the major arts of China are traced by specialists and are surveyed from the point of view of their historical development. An historical survey of the development of Chinese art from the dawn of civilization to the present day is made which includes the role played by foreign influences such as the spreading of Buddhism and the Chinese influence on other parts of the world. There are twenty-four hours of lectures in the morning and roundtable discussion and library work in the afternoon. During the afternoon workshop period the technique of Chinese painting is demonstrated. Although there is no prerequisite for this course, it is suggested that those who enroll should have some knowledge of art or have taken SOCIAL STUDIES 499—*Introduction to Chinese Culture*.

Credit: 3 semester-hours

ART 415. *School Arts and Crafts with Native Materials*

In this course the student gains an appreciation and understanding of art expression growing out of the immediate environment as he learns to work creatively with native materials. Useful and decorative articles are made from wood, fruit pits, seeds, grasses, reeds, and

native clay. The use of natural dyes for coloring is demonstrated. The construction of teaching aids using simple, native materials is also shown. Flower and plant arrangements for room and table decoration in keeping with good conservation practices are presented.

Credit: 2 semester-hours

GEOGRAPHY 503. *Economic Geography of the United States and Canada*

A study is made of the agricultural, industrial, and commercial development of the United States and of the geographic factors that have contributed to that development.

Credit: 2 semester-hours

GEOGRAPHY 504. *Economic Geography of Europe*

This course constitutes a study of the economic development of the nations of Europe in relation to the environmental background and resources that have made Europe one of the world's leading continents.

Credit: 2 semester-hours

GEOGRAPHY 509. *Economic Geography of Asia*

This course constitutes a treatment of the economic and commercial development of the countries of Asia in relation to their natural environment.

Credit: 2 semester-hours

GEOGRAPHY 406. *Geology*

This course deals with the earth and its geographic, stratigraphic, and structural development throughout geologic time; the record of the evolution of life as interpreted through a study of rocks and fossils.

Credit: 2 semester-hours

GEOGRAPHY 408A and 408B. *Political Geography*

This course deals with the geographic conditions influencing the significant changes in the political divisions of the world. Emphasis is placed on geographic factors influencing racial, religious, commercial, and political adjustments between nations.

Credit: 2 semester-hours each

GEOGRAPHY 409. *Economic Geography of the British Isles*

A comprehensive treatment of the resources of the British Isles is given, and the influence of the natural environment upon the utilization of those resources in the economic, social, and political development of the British Empire is evaluated.

Credit: 2 semester-hours

GEOGRAPHY 410. *Economic Geography of Caribbean America*

This is a study and interpretation of the major and important minor economic areas of Caribbean America in relation to the natural environment.

Credit: 2 semester-hours

GEOGRAPHY 411. *Geographic Influences in American History*

A study is made of the geographic factors influencing the development of social, economic, and political life in America.

Credit: 2 semester-hours

GEOGRAPHY 412. *Geography of Africa, Australia, and New Zealand*

A study is made of the activities of the people of Africa, Australia, and New Zealand in relation to their natural environment. Attention is given to the influence of geographic factors upon the post-war adjustments and the possible future relations of these countries with the United States.

Credit: 2 semester-hours

GEOGRAPHY 413. *Economic Geography of South America*

This course constitutes a study of the influence of the natural environment upon production and utilization of resources in the economic, social, and political development of the various nations of South America.

Credit: 2 semester-hours

GEOGRAPHY 414A and 414B. *Advanced Economic Geography*

This course is a study of the influence of the physical environment upon the production of, the trade in, and the utilization of the important agricultural, forest, mineral and sea products, and the manufactured commodities of the world.

Credit: 2 semester-hours each

GEOGRAPHY 416. *Conservation of Natural Resources*

This course includes a study of the natural resources of the United States, their past and present exploitation, their influence on the development of the nation, their conservation and future use.

Credit: 2 semester-hours

GEOGRAPHY 418. *Regional Geography of North America*

This course constitutes a detailed regional treatment of the continent of North America. Emphasis is placed upon the human activities of the various regions in relation to their natural environment and the relations of the regions to each other.

Credit: 2 semester-hours

GEOGRAPHY 419. *Economic Geography of the Union of Soviet Socialist Republics*

This course is designed to give a comprehensive and objective treatment of Soviet Russia's natural resources and industrial potential in relation to the geographic environment. Special emphasis is given to the formative periods of Russia's industry to show the significance of and the continuous operation of geographical factors in the economic development of Russia.

Credit: 2 semester-hours

GEOGRAPHY 420. *Field Geography and Conservation*

This course constitutes a study of the relation between relief features of northern New Jersey, the location of natural resources, and the way in which land use and population distribution follow these patterns. Emphasis is given to the reading and interpretation of topographical maps and aerial photographs and to a study of the United States Geological and Soil Surveys of this region. By means of an actual land-use survey the student comes to appreciate the problems of conservation as they grow out of man's use of natural resources.

Credit: 2 semester-hours

MUSIC 401. *The Teaching of Music in Secondary Schools*

This course deals with the aims, content, and procedure in the teaching of music in the junior and senior high school.

Credit: 3 semester-hours

MUSIC 405. *Orchestra Conducting and Score Reading*

This course aims to develop skills in orchestra conducting and score reading. It includes a study of the particular type of ear training needed in conducting, the technique of the baton, score reading, and interpretation.

Prerequisite: MUSIC 305

Credit: 2 semester-hours

MUSIC 406. *Modern Music*

This course aims to interpret modern music in terms of the social, political, and cultural life of our times. It includes a study of the music of Debussy, Richard Strauss, Schoenberg, Stravinsky, De Falla, Hindemith, Bartok, Shostakovich, and others. Special attention is given to the relation of modern music to other forms of modern art expression.

Credit: 2 semester-hours

MUSIC 407. *The Development of the Opera*

This course deals with the origin, development, and characteristics of opera in the Italian, French, German, and Russian schools. Class analyses are made of representative operas of these schools. The content of this course is related to the Saturday afternoon broadcasts from the Metropolitan Opera, New York City. Special attention is given to building an ear repertory of operatic music heard over the radio.

Credit: 2 semester-hours

MUSIC 408. *Wagner Music Dramas*

This course deals with the operas and music dramas of Richard Wagner. It includes a study of Wagner's artistic ideals and their application to his compositions.

Credit: 2 semester-hours

MUSIC 409. *Counterpoint*

This course aims to provide a practical treatment of counterpoint for music students. It includes analysis of the works of the sixteenth century masters of vocal polyphony with enough of original work to insure a grasp of the principles involved.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 410. *Composition*

This course aims to develop the creative power of the student in the composition of small vocal and instrumental forms. Special attention is given to the functional aspects of composition in word setting, writing accompaniments, and improvisation.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 413. *Masters of the Symphony*

This course aims to provide the student with an understanding and appreciation of the classic and romantic symphony through the study of the symphonies of Haydn, Mozart, Beethoven, Schubert, Schumann, and Brahms.

Credit: 2 semester-hours

MUSIC 414. *Modern Symphonic Forms*

This includes a study of the post-romantic symphonies of Bruckner, Mahler, Dvorak, Franck, Tchaikowsky, and Sibelius; the symphonic poems of Strauss, Smetana, and Debussy, and the orchestral suites of Rimsky-Korsakoff, Ravel, and Stravinsky.

Credit: 2 semester-hours

MUSIC 418. *Music of Russia*

This course provides a survey of Russian music from the Czarist regime to the modern Soviet. It aims to interpret Russian music in terms of the social, political, and cultural forces which have shaped it.

Credit: 2 semester-hours

MUSIC 420. *The Art Song*

This course provides a survey of the art song and includes a detailed study of the art songs of Beethoven, Schubert, Schumann, Brahms, Wolf, and Strauss. Special attention is given to the relation of music and poetry.

Credit: 2 semester-hours

MUSIC 422. *Chamber Music*

This course provides a survey of chamber music and includes a detailed study of the string trio, quartet, and quintet by classic, romantic, and modern composers. The content of this course is related to the Sunday afternoon broadcasts of the New Friends of Music and Frick Art Museum concerts in New York City.

Credit: 2 semester-hours

MUSIC 423. CHORAL MASTERWORKS

This course provides a survey of choral masterworks from Palestrina to Stravinsky. It includes a detailed study of Bach's *B Minor Mass*, *St. Matthew Passion*, Handel's *Messiah*, Beethoven's *Missa Solemnis*; Mendelssohn's *Elijah*; Verdi's *Requiem* and other great choral works. The content of this course is related to the current musical season in New York City.

Credit: 2 semester-hours

MUSIC 424. *A Survey of Wind Instrument Music*

This course includes music for full band, small ensembles, and solos with emphasis on literature available for brass and wood-wind players in high school. A laboratory band as well as numerous small ensemble groups are formed by members of the class so that performance of all music under consideration is possible. Special attention is given the music originally composed for wind instruments. New music from all publishers is available for examination and evaluation.

Credit: 2 semester-hours

MUSIC 425. *Music of the Romantic Period*

This course deals with the romantic spirit in music as expressed in the works of Schubert, Schumann, Mendelssohn, Chopin, Berlioz, Liszt, and others. It includes a study of program music, piano and song literature, and the rise of national schools of musical composition. Representative works are studied through performance, recordings, and radio listening. Special attention is given to parallel aspects of Romanticism in literature and the visual arts.

Credit: 2 semester-hours

MUSIC 426. *Survey of Music Literature*

This is a survey course in Music Literature and includes a study of folk song, art song, oratorio, opera, idealized dance forms, instrumental suite, sonata, symphony, and symphonic poem. Abundant use of musical illustration, directed listening, and music making acquaints the student with great masterpieces of music which should be the possession of every generally cultured person. This course is designed for the general student and aims to make intelligent and appreciative consumers of music. It is a non-technical course and attempts to make intelligent and appreciative radio-listeners and concert goers. Special attention is given to the relation of music to English literature and the social studies.

Credit: 2 semester-hours

MUSIC 428. *Music of Twelve Great Nations*

This course aims to increase understanding among people through a study of the folk and related art music of twelve great nations. At a time of national tensions music crosses boundary lines and tends to unite peoples. Special attention is given to the social, economic, political, and cultural backgrounds of the music of these nations. Because of the social implications of this music this course is recommended particularly to teachers of the social studies. Musical illustrations are given at the piano, through group singing, and through recordings.

Credit: 2 semester-hours

MUSIC 429. *A Cappella Choir and Choral Conducting*

This course deals with the theory and practice of the *a cappella* choir. It includes a study of the principles of group tone production, phonetics as related to singing, tuning, posture, techniques of choral conducting, interpretation, and score reading. A feature of this course is the study of a selected list of choral literature suitable for use in school, church, and community. Outstanding students are given an opportunity to conduct the College A Cappella Choir.

Prerequisite: MUSIC 301

Credit: 2 semester-hours

MUSIC 499A. *Problems in the Teaching of School Music*

This is a post-student teaching course. It aims to (1) evaluate student-teaching experiences; (2) give an opportunity to the student to share with his classmates the problems encountered in student teaching and to seek a possible solution for the same; (3) meet shortages in teacher preparation not provided for in previous courses; (4) give the student a unified view of school music education before he enters the teaching field. The content of this course is determined largely by the expressed needs of the students.

Credit: 2 semester-hours

MUSIC 499B. *Workshop in School Music*

This course is designed primarily for music teachers-in-service who wish to work out projects for use in their respective schools. The content of this course is determined by needs in the field. It may include folk song dramatizations, small vocal and instrumental ensembles, the integration of music with other subjects in the curriculum, music for boys, visual aids in music pageants, festivals, and materials for special programs. This course provides the teacher with a number of units of work suitable for classroom use.

Credit: 2 semester-hours

HEALTH EDUCATION 401. *Methods and Materials in Health Education*

This course prepares the teacher to assume the responsibility for organizing and conducting a program of health instruction. The coordination of health with other subject-matter fields and the evaluation of textbooks and audio-visual materials are given special consideration.

Credit: 2 semester-hours

HEALTH EDUCATION 407. *Prevention and Care of Athletic Injuries*

This is a lecture and laboratory course designed to acquaint the student with ways to prevent and to care for the common injuries sustained in athletics.

Credit: 2 semester-hours

HEALTH EDUCATION 408. *Behind-the-Wheel Driver Education and Driver Training*

Part I

This part consists of a minimum of 40 hours of class recitations and discussions for which home reading and study have been assigned. The following topics are included: (1) history and development of driver education and training programs; (2) objectives of driver education; (3) local, state, and national traffic safety programs; (4) driver qualifications; (5) psycho-physical testing; (6) curriculum content of school courses in driver education and training; (7) construction, operation, and maintenance of automobiles; (8) traffic laws and driver licensing; (9) traffic engineering; (10) pedestrian education and protection; (11) equipment for teaching driver education; (12) liability, costs, and insurance; (13) planning driver education as a part of the daily program of the high school; (14) public relations; (15) records and reports; and (16) visual aids in teaching driver education.

Part II

This part consists of a minimum of 20 hours devoted to the following: (1) behind-the-wheel instruction; (2) demonstrations and student-teacher practice in the car; and (3) road tests in traffic. Home reading and study are required in preparation for these projects.

Prerequisite: License to drive a car

Credit: 2 semester-hours

HEALTH EDUCATION 411. *School Health Services*

The student is familiarized with the health services available in the school. The part which the teacher plays in coordinating his activities with the school medical staff is emphasized.

Credit: 2 semester-hours

HEALTH EDUCATION 412. *Home Hygiene and Care of the Sick*

Principles, methods, and content for teaching home care of the sick and mother and baby care are presented in this course. All lessons are demonstrated. Teaching by students is an essential part of the course. Successful completion of the course qualifies the student as a Red Cross instructor in home care of the sick and mother and baby care for student groups, mothers' groups, and other community groups. Credit for this course may be applied as partial fulfillment for the requirements for the permanent certificate for school nurses. Nurses, teachers, and teachers-in-training may enroll for this course.

Credit: 2 semester-hours

PHYSICAL EDUCATION M405. *Management of Athletic Activities*

The student is provided with information essential to the good management of an intra-mural and interscholastic athletic program. Some of the major problems to be considered are: education values, health and safety of participants, insurance, transportation, scheduling, management of finances, budgeting, maintenance of play areas, care of supplies and equipment, state and local athletic associations, and the organization of leagues and meets.

Credit: 2 semester-hours

PHYSICAL EDUCATION W405. *The Program of Physical Education for High-School Girls*

Consideration is given to the entire physical education program for girls in junior and senior high school including: preparation of courses of study, methods of instruction, and extra-curricular activities. Active participation in the activities may be required by the instructor.

Credit: 2 semester-hours

PHYSICAL EDUCATION 409. *Organization and Administration of Physical Education*

The details of organizing the units of the physical education programs are discussed. Various topics, such as legislation, financing, curriculum construction, grading, excuses, plant facilities, supplies and equipment, and office management are considered.

Credit: 2 semester-hours

PHYSICAL EDUCATION 410. *Water Safety and First Aid*

This course includes intensive instruction in swimming, diving, water sports, boating, canoeing, water safety, and first aid. Students can qualify for Red Cross certificates during this course.

Credit: 2 semester-hours

THE NEW JERSEY STATE SCHOOL OF CONSERVATION

The six State Teachers Colleges, the State Department of Education, and the State Department of Conservation and Economic Development jointly operate the New Jersey State School of Conservation at Lake Wapalanne in Stokes State Forest, Sussex County. Credit for the courses given at the New Jersey State School of Conservation may be applied toward the Master's degree at the New Jersey State Teachers Colleges, subject to approval in advance by the institution concerned. Students are advised to check with their advisers relative to the application of these credits towards graduate degrees.

The following courses may be offered at the New Jersey State School of Conservation. For complete course descriptions, please refer to the departmental write-ups appearing in this bulletin. Special descriptive announcements may also be had by writing to the New Jersey State School of Conservation, Upper Montclair, New Jersey.

ART DEPARTMENT

Art 415. *School Arts and Crafts with Native Materials*

GEOGRAPHY DEPARTMENT

Geography 420. *Field Geography and Conservation*

INTEGRATION DEPARTMENT

- Integration 440. *Camping Education*
- Integration 441. *Conservation Education*
- Integration 442. *Practicum in Camp Leadership*
- Integration 443. *Practicum in Camping Education and Administration*
- Integration 444. *Practicum in Conservation Education*
- Integration 480. *Field Science for Elementary Teachers*

MATHEMATICS DEPARTMENT

Mathematics 411. *Field Mathematics*

MUSIC DEPARTMENT

Music 424. *A Survey of Wind Instrument Music*

HEALTH AND PHYSICAL EDUCATION DEPARTMENT

- Health Education 412. *Home Hygiene and Care of the Sick*
- Physical Education 410. *Water Safety and First Aid*

SCIENCE DEPARTMENT

- Science 405. *Field and Laboratory Studies in Science*
- Science 411. *Problems in Field Studies in Science*
- Science 412. *Field Studies in Science: Biological*
- Science 413. *Field Studies in Science: Physical*
- Science 414. *Conservation of Plants and Animals*
- Science 415. *Conservation of Soil and Water*
- Science 416. *Problems in Conservation*
- Science 417. *Science Problems in Conservation*

SOCIAL STUDIES DEPARTMENT

- Social Studies 477. *Rural Sociology*
- Social Studies 494. *Social, Economic, and Geographic Implications of Conservation*

COLLEGES FROM WHICH GRADUATE STUDENTS NOW MATRICULATED RECEIVED THEIR BACCALAUREATE DEGREE

A & T College, Greensboro, N. C.
 Alfred University
 Barnard College
 Bennett College
 Bethany College
 Bloomheld College
 Bob Jones University
 Boston University
 Brown University
 Calvin College
 Catholic University
 Cedar Crest College
 Colby College
 Colgate University
 College of St. Elizabeth
 College of the City of New York
 Cooper Union
 Cornell University
 Dana College of the University of
 Newark
 Dickinson College
 Drew University
 Duke University
 East Stroudsburg State Teachers
 College
 Eastern Kentucky State Teachers
 College
 Emmanuel College
 Fordham University
 Franklin & Marshall College
 Georgetown University
 Georgian Court College
 Goucher College
 Grove City College
 Guilford College
 Hampton Institute
 Holy Cross College
 Hope College
 Howard University
 Hunter College
 Lafayette College
 Lehigh University
 Limestone College
 Muhlenberg College
 New Jersey College for Women
 New York University
 Notre Dame University

Oberlin College
 Ohio Wesleyan University
 Ouachita College
 Panzer College
 Pennsylvania State College
 Pratt Institute
 Rider College
 Russell Sage College
 Rutgers University
 St. Bonaventure College
 St. John's University
 St. Lawrence University
 St. Peter's College
 Seton Hall College
 Smith College
 Springfield College
 State Teachers College at Glassboro
 State Teachers College at Jersey City
 State Teachers College at Kutztown
 State Teachers College at Montclair
 State Teachers College at Newark
 State Teachers College at Paterson
 State Teachers College at Trenton
 State Teachers College at West
 Chester
 Swarthmore College
 Syracuse University
 Teachers College, Columbia University
 Temple University
 Tufts College
 Tusculum College
 University of Alabama
 University of Florida
 University of Illinois
 University of Maine
 University of Michigan
 University of North Carolina
 University of Pennsylvania
 University of Wisconsin
 Upsala College
 Vassar College
 Washington & Lee University
 Wesleyan University, Connecticut
 Wheaton College
 Woman's College of the University of
 North Carolina
 Xavier University

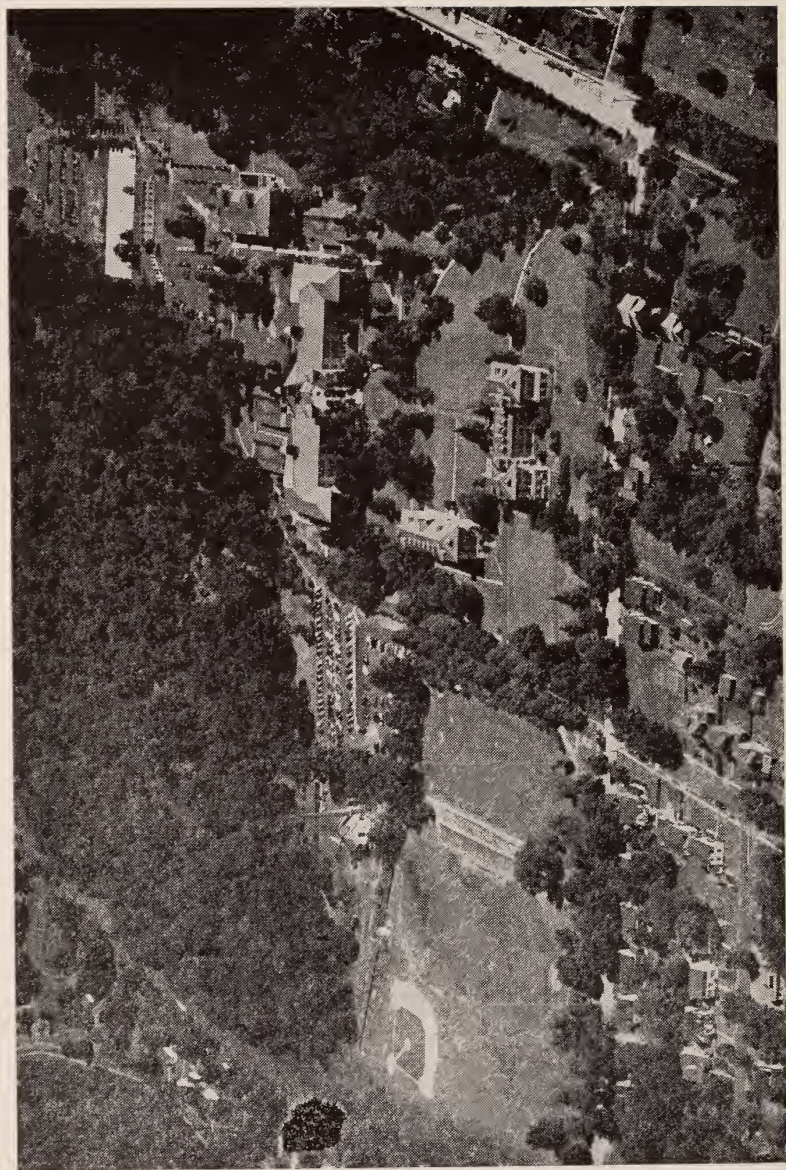


NEW JERSEY
STATE TEACHERS COLLEGE
AT MONTCLAIR

GRADUATE BULLETIN
1955-1957



UPPER MONTCLAIR, NEW JERSEY



"A Wooded Campus Thirty Minutes from Times Square"

BULLETIN

OF THE

New Jersey State Teachers College at Montclair

GRADUATE DIVISION

NEW JERSEY STATE TEACHERS COLLEGE

Montclair

VOLUME 48

1955

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TABLE OF CONTENTS

	<i>Page</i>
Officers of Administration	5
Graduate Faculty	6
GENERAL INFORMATION	7
History	7
Location	7
Library	7
Living Accommodations	8
Administration	8
Purposes	9
Organization	9
Student Teaching	10
Admission and Matriculation	10
Advanced Credits	11
Student Load	11
Requirements for A. M. Degree	11
Comprehensive Examinations	12
Application for Conferment of Degree	12
General Restrictions	13
Fees and Service Charges	13
The Master's Thesis and Research	13
Fields of Work	15
DEPARTMENT OF BUSINESS EDUCATION	16
DEPARTMENT OF ENGLISH	21
DEPARTMENT OF FOREIGN LANGUAGES	37
DEPARTMENT OF INTEGRATION	38
DEPARTMENT OF MATHEMATICS	58
DEPARTMENT OF SCIENCE	71
DEPARTMENT OF SOCIAL STUDIES	86
OTHER COURSES THAT MAY BE USED AS	
ELECTIVES	113
Fine Arts	113
Geography	114
Music	116
Health Education	122
Physical Education	123
New Jersey State School of Conservation	124
Colleges from Which Graduate Students Now Matriculated	
Received Their Baccalaureate Degrees	126

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GENERAL INFORMATION

HISTORY

In 1908 the Montclair State Teachers College first began its teacher-education program as a two-year Normal School. In 1927, by act of the State Board of Education, it was changed to a State Teachers College with four-year curricula leading to a Bachelor of Arts degree and certification to teach in the secondary schools of the State. That the College might better serve teachers in service, extension courses were instituted in 1929 and summer sessions in 1930. The fact that hundreds of teachers in service registered in these programs annually shows the wisdom of the State Department in instituting them. The majority of these teachers held A.B. degrees, and they wished to continue their preparation and receive graduate credit for their work. They, therefore, requested that the College offer courses for graduate credit. To meet this demand, the Commissioner of Education recommended and the State Board of Education voted in June, 1932, that such work be offered and the College be empowered to grant the degree of Master of Arts. Graduate courses were first offered at the State Teachers College at Montclair in the summer of 1932 and have been offered in all regular and summer sessions since. There are now more than six hundred students matriculated in the Graduate Division.

LOCATION

The College is located on the northern edge of Upper Montclair about three miles from Montclair Center. The campus is on the boundary line between Essex and Passaic Counties. Valley Road, the main thoroughfare between Montclair and Paterson, bounds the campus on the east; to the west is the ridge of Watchung Mountain; to the north are Great Notch and Paterson; to the south, Montclair, Newark, and the Oranges.

The College may be reached by the Lackawanna Railroad to Montclair, thence by bus to the campus; by the Erie Railroad to Montclair Heights Station; and by bus from most of the cities in Northeastern New Jersey.

LIBRARY

Conveniently located on the main floor of College Hall is the library of 66,000 volumes with a large reading and reference room and two smaller reading rooms housing the music collections and the curriculum laboratory and textbook exhibit. Special collections include the Howe collection of organ music; the Mark Andrews music

library; the Webster Memorial collection of modern poetry, including many first editions and autographed copies; the Finley collection of science textbooks, which has been augmented by early textbooks of historical significance from other sources; the Carnegie Secondary Art set of books and pictures; a collection of New Jerseyana; and a recent outstanding gift, the Roy W. Hatch collection of Lincolniana. Of special interest is the China Institute Library, a permanent loan from the China Institute of New Jersey. The textbook collection of 5,000 volumes includes the most recent textbooks in all subjects on both the elementary and secondary level and curricula from the majority of communities and counties of New Jersey as well as outstanding curricula from other states. The library also maintains a complete file of bulletins of the U. S. Office of Education for which this library is designated as an official depository library in the area. An up-to-date and widely-used file of pamphlets, maps, and pictures, classified by subject, is available to all students.

All of the books, including the reference collection, are on open shelves to which the students, as well as faculty, graduates, and teachers-in-service, have access and borrowing privileges. This open-shelf policy applies even to the periodical collection which consists of back issues of all but the most ephemeral of over 300 currently received periodicals. Bound volumes of magazines total over 2,500.

Supplementing the College library is the library of the College High School which is a large, pleasant room housing 3,800 volumes and located in the College High School. These books are catalogued at the College library and are available through the main catalog as well as through the catalog of the College High School. The High School Librarian works in close cooperation with the four members of the College library staff, particularly in the field of literature for adolescents, in which an extensive and up-to-date collection is maintained.

LIVING ACCOMMODATIONS

During the College year graduate students are accommodated in the dormitories whenever possible. The rate for the Summer Sessions is \$14.50 a week including room, breakfast and dinner. These charges are subject to revision.

ADMINISTRATION

The graduate program of the College is administered with the assistance of two college committees: the Graduate Committee appointed by the President of the College, and the Administrative Council which consists of the President, the Dean of Instruction, the Director of Admissions, the Chairman of the Graduate Committee, the Director of Personnel and Guidance, and the heads of the major departments.

PURPOSES

The New Jersey State Teachers College at Montclair is a professional school devoted primarily to the interests of secondary education. This objective is the controlling factor in the development of the curricula, teaching procedures, extra-curricular activities, and college spirit, and tends to unify all the activities of the college—professional, cultural, and social.

Graduate courses are organized to serve the purposes of two groups of students:

Those who wish to matriculate for the degree of Master of Arts:
Graduates of accredited liberal arts and professional colleges.
Secondary teachers, supervisors, principals, and other school administrators, who are graduates of approved colleges.

Those who do not wish to matriculate for the degree:

Students who hold graduate degrees but who wish to continue their professional preparation.

College graduates who wish to take courses leading toward secondary school certification.

Students who are matriculated for advanced degrees in other colleges and universities and who plan to transfer their credits.

Special students taking courses for cultural purposes without reference to credit.

ORGANIZATION

The work is organized to meet the needs of those who wish to do full-time work and of those who are teaching and who wish to take courses in the late afternoon, evening, or on Saturday morning. The courses in the Part-Time and Extension Division and Summer Sessions are given by members of the college staff and are granted resident credit. It is thus possible for a teacher in service to earn the Master's degree without taking a leave of absence from his teaching position.

To meet the needs of those candidates lacking secondary certification, some of the professional courses required for certification in the State of New Jersey may be taken on the graduate level. Students holding A.B. degrees from other colleges are permitted to matriculate for the Master's degree here prior to obtaining certification; but by the time the degree is to be conferred, they must have qualified for a teaching certificate. In all major departments except that of the Department of Integration this must be a secondary teaching certificate. Students who are working for certification should write

to the Secretary of the State Board of Examiners, 175 West State Street, Trenton, New Jersey, submitting a transcript of all their previous college work and ask for an evaluation as to what they are lacking for certification.

Graduate students who must meet certification requirements as well as the requirements for the Master's degree will find it necessary to spend additional time on the campus and in student teaching. Supervised student teaching, required for certification, does not carry graduate credit.

STUDENT TEACHING

Graduates of other colleges who wish to do their student teaching through the New Jersey State Teachers College at Montclair should obtain from the Integration Office the mimeographed statement outlining the conditions under which it can be done.

Students who desire to meet the State requirement in Supervised Student Teaching must register for that experience with the Assistant in Graduate Personnel.

ADMISSION AND MATRICULATION

The applicant for admission must be a graduate of an accredited college or university and must present evidence of his qualifications for advanced study as shown by a high scholastic record, training, and experience. Note that matriculation for the Master's degree must be completed before the candidate has acquired more than eight semester-hours of graduate credit.

Steps in the matriculation process are as follows :

1. The candidate secures from the Graduate Office an application which must be completed and returned to that office.

2. The candidate will have his college send official transcripts of all undergraduate credits (if the applicant is not a graduate of Montclair), to the Chairman of the Graduate Committee. Official transcripts should be on file in the Graduate Office before the time of registration for graduate courses.

3. After the application and transcripts have been received and reviewed in the Graduate Office, the candidate will be invited to confer with the Chairman of the Graduate Committee.

4. The candidate will next confer with the graduate adviser in the department in which he expects to do his work, and the adviser will develop a program of courses with him.

5. The candidate will then have a final brief conference with the Chairman of the Graduate Committee. Following this, the candidate will be advised in writing of the decision of the Graduate Committee and will be furnished with a statement of the work to be completed.

Final action on all applicants is vested in the Administrative Council.

Announcements are made with the offerings of courses each semester as to when the departmental advisers and the Chairman of the Graduate Committee may be consulted.

ADVANCED CREDITS

For graduates of institutions other than the New Jersey State Teachers Colleges and Rutgers University (the State University), a minimum of thirty-two semester-hours of residence work is required. In the case of graduates of the New Jersey State Teachers Colleges and the State University a maximum of eight semester-hours of graduate work from other accredited institutions may be offered toward the Master's degree.

Students who are eligible to transfer from other institutions graduate credits earned prior to matriculation must submit official transcripts of these credits for consideration by the Graduate Committee.

Candidates eligible to take work at other graduate schools and who desire to do so after matriculation must first secure written permission from the head of the department concerned at Montclair and from the Chairman of the Graduate Committee, if the credits so gained are to be applied toward the Master's degree.

Not more than eight semester-hours of graduate credit will be granted for work taken prior to matriculation. For this reason, candidates should apply for matriculation before the completion of that amount of work.

STUDENT LOAD

Graduate work should involve careful and intensive study with ample time to explore areas which may warrant further study.

Twelve to sixteen hours of work per semester is considered a full-time program for the graduate student in residence.

For teachers employed full time, six semester-hours of work in any one semester shall be the maximum load with four semester-hours being recommended.

In the regular six-week summer session, the maximum load shall be eight semester-hours. The Graduate Committee strongly recommends that the student consider six semester-hours of work a full program.

REQUIREMENTS FOR A.M. DEGREE

Thirty-two semester-hours of graduate credit are required for the Master of Arts degree.

Each student selects a major field in which he must complete such courses as are prescribed.

Each department except that of Integration requires at least thirty semester-hours of credit in its field as a prerequisite to matriculation.

The Integration Department requires twenty-four semester-hours in its field; all other departments require a minimum of eighteen semester-hours.

For graduates of teachers colleges, at least six semester-hours of the required total must be taken in the Department of Integration. The amount of such work required of graduates of other colleges is determined by the number of courses needed for certification. INTEGRATION 503 is required of all students matriculated in the Graduate Division.

Four of the total credits may be satisfied by a thesis which meets the approval of the Graduate Committee.

A candidate who is matriculated for the A.M. degree after September 1, 1952, must attend as a full-time graduate student one summer session or one regular semester.

An average of "B" or better is required for work submitted for the Master's degree. No credit is given for work below "C."

Certification to teach in New Jersey or a letter of eligibility is a prerequisite to the conferment of the Master's degree at the Montclair State Teachers College. Those matriculated in subject-matter areas must be certified to teach the major subject in secondary school. Students matriculated in the Integration Department need either elementary or secondary certification.

Work for the degree must be completed within five years of the date of matriculation.

COMPREHENSIVE EXAMINATIONS

A comprehensive departmental examination is required in all departments. This examination may be both written and oral. The examination is given by the department in which the student does his major work. No academic credit is given for the examination.

In some departments the thesis may be offered in place of the written comprehensive examination. Usually the oral examination is required in case a thesis or research problem is presented in lieu of the written examination.

APPLICATION FOR CONFERMENT OF DEGREE

Candidates must file with the Registrar an application for conferment of the degree before November 30 of the college year in which the work is to be completed. Application blanks for this purpose may be secured from the Registrar. The burden of responsibility for the request rests with the candidate. This is of special significance to the teacher in service who may have distributed the graduate work over four or five years.

GENERAL RESTRICTIONS

No credit is granted for :

1. Correspondence work.
2. Junior-college courses.
3. Graduate courses with mark below "C."
4. Supervised teaching.
5. More than eight semester-hours of graduate credit prior to matriculation.
6. The comprehensive departmental examination.
7. More than six semester-hours of graduate credit earned in extension (off-campus) courses.
8. Graduate work taken elsewhere unless the student is a graduate of one of the New Jersey State Teachers Colleges or the State University, and in such cases not more than eight points.

FEES AND SERVICE CHARGES

Eleven dollars (\$11.00) per semester-hour to residents of New Jersey and those non-residents who teach in New Jersey public schools.

Thirteen dollars (\$13.00) per semester-hour to non-residents of the State of New Jersey who do not teach in New Jersey public schools.

Late Registration Fee, two dollars (\$2.00).

Service charge, fifty cents (\$.50) per semester-hour.

Supervised Student Teaching (if required), sixty-six dollars (\$66.00).

Dormitory fees including room, breakfast, and dinner for a summer session, fourteen and one-half dollars (\$14.50) a week.

These charges are subject to revision.

All charges are payable during the registration period.

THE MASTER'S THESIS AND RESEARCH

The writing of a Master's thesis is optional. The election to write a thesis should be considered in terms of the subject matter, the opportunities to carry out the research project on a standard acceptable for a thesis, and the needs of the individual in relation to his plan of graduate study.

Some departments have in effect the equivalent of a thesis requirement except for the formal filing of the complete typed thesis following standard style.

Students in the Social Studies Department complete either a Master's thesis or a Master's essay on a problem which each individual chooses for specialization. The student is then given an oral examination on the paper before a seminar of members of the Social Studies Department.

An extensive term paper resulting from an individual research project is completed by every student in the course, *INTEGRATION 603, Principles and Practices of Research*. Students who plan to write a thesis are encouraged to take this course prior to the work for the thesis.

Other departments have research courses which follow the basic course, *INTEGRATION 503, Methods and Instruments of Research*, and which are designed to give the student a good foundation for thesis work. These special departmental provisions are outlined in each departmental statement of requirements.

Students writing a thesis must register with the Chairman of the Graduate Committee for the course, *GRADUATE 500, Master's Thesis*, for four semester-hours.

The following information is of aid to students submitting Master's theses:

a. Choice of Topic and Plan of Research.

The topic and plan of research will be worked out in consultation with the head of the student's major department. A sponsor will be appointed by the head of the department.

b. Presentation of Plan.

The plan for the thesis and its research must meet the approval of the sponsor, the head of the department concerned, the Graduate Committee, and the Dean of Instruction.

c. Mechanics of the Thesis.

Each thesis student should be guided by William G. Campbell's *Form and Style in Thesis Writing* which may be borrowed from the Library or purchased at the College Bookstore.

d. Submitting the Thesis.

A typewritten copy of the thesis must be submitted to the sponsor who, if he approves of it, will submit the thesis to a reading committee. This should be done not later than six weeks prior to the date of graduation. Any changes recommended by the reading committee must be made by the candidate. Three typewritten copies of the thesis, as finally approved, must be presented by the candidate to the head of his major department at least two weeks before the date of graduation. Final acceptance rests with the Administrative Council.

- e. An acceptable thesis shall show evidence that:
1. The candidate has comprehended the essentials of his problem, followed a well-organized plan of work, and offered satisfactory solutions.
 2. The candidate has made an independent and intensive study of his problem.
 3. The candidate has made a comprehensive study of the literature of his subject.
 4. The candidate's conclusions are justified by his findings.
 5. The candidate has a practical working knowledge of research methods.
 6. The thesis is not a duplicate of a similar study.
 7. The data involves a sufficient fund of information to make the findings significant.
 8. The thesis is of definite value to the teaching profession.

FIELDS OF WORK

Majors in graduate work are offered in the fields of Administration and Supervision, Biology, Business Education, English, Mathematics, Personnel and Guidance, Physical Science, Science, and Social Studies. In each curriculum there is a core of educational courses and major subject-matter courses. The amount of each type depends on the candidate's undergraduate work and is determined by the student's graduate committee. The work in Administration and Supervision and in Personnel and Guidance is limited largely to professional courses in order to meet the State certification requirements.

Students choosing a major field of study at the graduate level should keep in mind that certain experience requirements are needed in the fields of Administration and Supervision and Personnel and Guidance. Enrollment in certain Integration courses is limited to those who are having or who have had actual teaching experience. For details see page 38.

DEPARTMENT OF BUSINESS EDUCATION

The graduate work in the Department of Business Education is designed to prepare teachers of business education for administrative, supervisory, specialized work or master teaching in the field of business education. In order to attain these objectives the candidate has an opportunity to supplement his undergraduate program and to explore advanced areas of work in accordance with his individual background, experience, achievement, and professional needs.

Graduate work toward the Master of Arts degree in Business Education presupposes the completion of an undergraduate major in business education, or its equivalent. The undergraduate major is based on the requirements as established by the New Jersey State Board of Education. For further details see the undergraduate bulletin.

In lieu of four of the thirty-two semester-hours of credit required for the Master of Arts degree, the candidate may write a thesis giving the results of some study in the field of business education or its teaching. This study may be made only after consultation with the Chairman of the Business Education Department. Plans should be made to have such a study in its final form and approved by the Department of Business Education by May 1st of the year in which the degree is expected to be conferred.

All candidates for the Master of Arts degree in Business Education must pass a comprehensive examination before they are granted the degree. This examination is given the first Saturday in April and the last Saturday in July for those candidates anticipating graduation. It is general in nature and is intended to test the candidate's maturity of thought with respect to business education.

GRADUATE PROGRAM OF STUDIES

MASTER OF ARTS DEGREE IN BUSINESS EDUCATION

Division I. Required Integration Department Courses (6 s. h. required)

Int. 503.	Methods and Instruments of Research	2 s. h.
Int. 500A.	Basic Educational Trends	2 s. h.
Elective	To be chosen on recommendation and approval of the Chairman of the Department of Business Education	2 s. h.

Division II. Research Seminar, Field Work and Thesis (8 to 10 s. h.)

B. E. 501.	Research Seminar in Business Education (required of all candidates)	4 s. h.
Graduate 500.	Thesis*	4 s. h.
B. E. 532.	Field Studies and Audio-Visual Aids in Business Education	4 s. h.
	or	
B. E. 533.	Supervised Work Experience and Seminar	

*Division III. Required Business Professional Courses**Group A—(4 s. h. required)*

B. E. 502.	Principles and Problems of Business Education	2 s. h.
B. E. 503.	The Business Education Curriculum	2 s. h.
B. E. 504.	Administration and Supervision of Business Education	2 s. h.
B. E. 505.	Tests and Measurements in Business Education	2 s. h.

Group B—(4 s. h. required)

B. E. 520.	Improvement of Instruction in Business Education	
Part A.	General Business Subjects	2 s. h.
Part B.	Bookkeeping, Accounting, and Business Arithmetic	2 s. h.
Part C.	Secretarial Subjects	2 s. h.
Either part may be elected separately. A minimum of two parts must be completed.		

Division IV. Elective Subject-Matter Courses

(8 to 10 s. h. required—dependent on the total accumulated in Division II—to be selected on recommendation and approval of the Chairman of the Department of Business Education.)

* Students writing a thesis will take 501A and will substitute four (4) semester-hours for the thesis in place of 501B. This will count as a total of six (6) semester-hours in research and thesis.

THE GRADUATE COURSES

BUSINESS EDUCATION 501. *Research Seminar in Business Education*

This course deals with research and literature in the field of business education. The emphasis is placed on making the classroom teacher an intelligent consumer of the current research findings and publications related to business education.

Credit: 4 semester-hours

BUSINESS EDUCATION 502. *Principles and Problems of Business Education*

The purpose of this course is to survey the basic principles and practices of business education. Among the topics considered are: history of the high school business program, purposes, attitudes of management and labor toward education, the relationship of general education to business education, and trends in the field.

Credit: 2 semester-hours

BUSINESS EDUCATION 503. *The Business Education Curriculum*

This course is a sequel to Business Education 502 which should be completed as a prerequisite. It deals with the curricula in business education for various levels and types of schools. In this course, the student learns how to evaluate present programs and to make recommendations for needed changes.

Credit: 2 semester-hours

BUSINESS EDUCATION 504. *Administration and Supervision of Business Education*

This course offers an opportunity to study the problems of organizing, directing, and supervising business education programs. Such matters as the functions of the administrator and supervisor of business education, textbook selection, teacher selection, testing programs, conferences, and equipment and layout are considered.

Credit: 2 semester-hours

BUSINESS EDUCATION 505. *Tests and Measurements in Business Education*

This course deals with constructing, administering, interpreting, and evaluating all types of testing materials in business subjects.

Credit: 2 semester-hours

BUSINESS EDUCATION 520A, B, C. *Improvement of Instruction in Business Education*

This course gives the experienced business teacher an opportunity to study the content, methods, teaching aids, and evaluation procedures in at least two * of the three specialized fields:

BUS. ED. 520A.* *General Business Subjects*

Credit: 2 semester-hours

BUS. ED. 520B.* *Bookkeeping, Accounting, and Business Arithmetic*

Credit: 2 semester-hours

BUS. ED. 520C.* *Secretarial Subjects*

Credit: 2 semester-hours

Note: A minimum of two (2) parts of Bus. Ed. 520 must be completed.

BUSINESS EDUCATION 532. *Field Studies and Audio-Visual Aids in Business Education*

This course gives the classroom teacher an opportunity to visit some of the many business offices, industries, and retailing organizations located in the metropolitan area. It also provides for a study of the many audio and visual aids available for use in business classes.

Credit: 4 semester-hours

BUSINESS EDUCATION 533. *Supervised Work Experience and Seminar*

The graduate student who has not had extensive business experience has an opportunity to work full-time for six weeks during the summer in a business position under College supervision. An evening conference is held weekly to discuss problems related to the work experience program.

Credit: 4 semester-hours

BUSINESS EDUCATION 540. *Auditing*

This course seeks to develop the meaning and techniques of auditing procedure. It includes practice in the fundamental mechanics of auditing as well as in the making of the formal report on an audit.

Prerequisite: 8 semester-hours of accounting.

Credit: 2 semester-hours

BUSINESS EDUCATION 541. *Tax Accounting*

The primary purpose of this course is to give a comprehensive picture of the Federal Tax structure, and to provide training in the application of basic principles to specific problems of the individual and corporation.

Prerequisite: 6 semester-hours of accounting.

Credit: 2 semester-hours

BUSINESS EDUCATION 542A. *Advanced Business Law Cases I*

This course presupposes a knowledge of the basic principles of business law. It is designed to furnish a broader understanding and background in areas requiring considerable training to be effective in the classroom. Cases are concerned with the topics of contracts, negotiable instruments, and insurance.

Credit: 2 semester-hours

BUSINESS EDUCATION 542B. *Advanced Business Law Cases II*

This advanced law course is a continuation of Bus. Ed. 542A, but course 542A is not a prerequisite. A basic knowledge of the principles of law is, however, required. The course includes a further study of law cases pertaining to bailments, carriers, sales, property, landlord and tenant, torts, and business crimes.

Credit: 2 semester-hours

BUSINESS EDUCATION 543A. *Advanced Accounting I*

The content of this course emphasizes an intensive study of the items making up accounting statements and the principles of valuation and income determination. Problem solving is an integral part of the course. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 543B. *Advanced Accounting II*

This course is a continuation of Bus. Ed. 543A, but course 543A is not a prerequisite. Topics treated include consignments, agency and branch accounting, consolidations, receivership accounting, estate and trust accounting. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

DEPARTMENT OF ENGLISH

Graduate study in the Department of English is designed:

1. To increase the student's comprehension and appreciation of the literature of Great Britain and of the United States of America.
2. To introduce current materials and methods for improving instruction in English in the secondary school.
3. To show how language functions in individual expression and in social communication in the language arts; reading, writing, speaking, and listening.
4. To investigate recent experimentation and research in the teaching of English.

REQUIREMENTS IN THE ENGLISH DEPARTMENT

Graduate study leading to the Master's degree in English presupposes an undergraduate major in English of at least thirty semester-hours. Before matriculation, each candidate for the Master's degree secures from the Head of the Department an approved course outline requiring at least eighteen semester-hours in English at the senior-graduate level. Distribution of these courses is as follows:

I. *Required Work in Literature.* Minimum requirements—12 semester-hours

A. American Literature. Minimum requirements—4 semester-hours.

These may be selected from the courses listed below:

Eng. 406, 407, 413, 421, 439, 442A, 442B, 443, 446, 525, 533, 537, 538

B. British Literature. Minimum requirements—6 semester-hours

These may be selected from the courses listed below:

Eng. 402, 404, 406, 407, 413, 420, 421, 431A, 431B, 443, 446, 502, 503, 505, 506, 515, 518, 521, 531, 532, 535

C. World Literature. Minimum requirement—2 semester-hours

This may be selected from the courses listed below:

Eng. 427, 432, 451, 459, 513, 514, 520A, 520B, 524, 528, 530, 534, 536

II. *Required Work in Language Study.* Minimum requirements—4 semester-hours

A. Language Study. Minimum requirement—4 semester hours
These may be selected from the courses listed below :

Eng. 408, 419, 507, 511, 512, 516

*B. Reading Courses

These courses are as follows :

Eng. 430, Eng. 455, Int. 430, Int. 530A, Int. 530B, Int. 532

*C. Speech Courses

These courses are as follows :

Eng. 410, 417, 435, 448, 449, 454, 456, 457, 461A, 461B, 462, 463, 464, 466, 467, 522

*NOTE: Either a course in reading or a course in speech may be offered toward meeting two of the required four semester-hours in this area.

III. *Required Work in the Teaching of English.* Minimum requirement—2 semester-hours

This may be selected from the courses listed below :

Eng. 401, 401X, 409, 517, 519

IV. Departmental Examination for which no academic credit may be given

All candidates for the Master's degree in English must pass a written comprehensive examination before the degree is awarded. Information concerning the examination may be secured from the Head of the Department.

The candidate may elect to write a thesis of professional value in the teaching of English in the secondary school. Four semester-hours of credit are granted for this thesis, but this credit cannot be considered part of the minimum eighteen semester-hours unless written permission is secured in advance from the Head of the Department.

GRADUATE COURSES

ENGLISH 502. *Victorian Poetry*

The most important English poets who wrote during the transition from the Victorian to the modern period are read and discussed. An important feature of the course is the analysis and appreciative reading of the lyric poetry of Rossetti, Swinburne, Hardy, Bridges, G. M. Hopkins, Francis Thompson, A. E. Housman, Kipling, and W. B. Yeats.

Credit: 2 semester-hours

ENGLISH 503. *Geoffrey Chaucer and His Times*

Some of the works of Chaucer are read rapidly, others studied intensively, so that the students may acquire a broad general understanding of Chaucer's place in the history of English literature as well as facility in reading and interpreting the medieval text of his stories.

Credit: 2 semester-hours

ENGLISH 505. *Philosophy and English Poets*

This course is designed to show the dependence of such English poets as Wordsworth, Coleridge, Shelley, Keats, Tennyson, and Browning upon the philosophical thinking of their day. The course aims to provide a philosophical background for the reading of teachers of modern literature and for the interpretation of much of the poetry which they teach in high school.

Credit: 2 semester-hours

ENGLISH 506. *John Milton*

This course has for its primary aim the understanding and evaluation of Milton's poetry. Contributory to this end are the following topics: the Puritan struggle for civil and religious liberty; the growth of science in the seventeenth century; the life, personality, and prose writings of Milton; his literary heritage and influence; comparison of Milton with the Cavalier Metaphysical poets.

Credit: 2 semester-hours

ENGLISH 507. *Critical Writing*

This course evolves a body of critical principles for judging art and literature, and provides training in the writing of criticism, ranging from comments upon pupils' themes to a full and comprehensive essay upon the work of some outstanding author.

Credit: 2 semester-hours

ENGLISH 511. *The History of Literary Criticism*

The purpose of this course is to familiarize the student with the chief doctrines of the great critics from Aristotle to I. A. Richards and T. S. Eliot and to correlate these critical doctrines with the outstanding writings of each age. By such a study it is possible for the student to evaluate the historical interrelations of expert criticism and literary production. A basic text is used, but much of the information is gleaned from source materials.

Credit: 2 semester-hours

ENGLISH 512. *The Growth and Structure of the English Language*

This course is designed to help the high school teacher understand the structure of modern English, one of the most complicated of contemporary tongues. Through an analysis of the historical evolution of our language, the student discovers the reasons for many of the seemingly illogical and arbitrary characteristics of modern English spelling, grammar, and morphology.

Credit: 2 semester-hours

ENGLISH 513. *The Renaissance*

This course deals with Petrarch and the humanists; Boccaccio and the *Novelle*; the House of the Medici, Savonarola, the Popes; Machiavelli and *The Prince*; Cellini and the *Autobiography*; Castiglione and *The Courtier*; Boiardo, Pulci, Ariosto, and the romantic epic; the drama; the art of Da Vinci, Botticelli, Michelangelo, Raphael, Titian, and others; Rabelais and the *Gargantua and Pantagruel*; Cervantes and *Don Quixote*; Ronsard and the French *Pleiade*.

Credit: 2 semester-hours

ENGLISH 514. *Origin and Development of the Arthurian Legend*

This course deals with the vague and tentative beginnings of the Arthur story in early chronicle and legend; with Geoffrey of Monmouth's pseudo-historical and Chretien de Troyes's romantic treatments; with the great medieval recapitulations of Gottfried von Strassburg, Wolfram von Eschenbach, and Sir Thomas Malory; with the Victorian retellings of Tennyson, Arnold, and Morris; with the musical adaptations of Wagner; and with the modern versions of E. A. Robinson. It includes a detailed history of the development of the legend in its divers forms.

Credit: 2 semester-hours

ENGLISH 515. *Robert Browning*

Browning's characteristic shorter poems are recalled or studied in order to define his fundamental ideas as a writer. This is followed by a study of his longer poems and dramas: the "soul-studies", *Pauline*, *Paracelsus* and *Sordello*; the dramas, *Strafford*, *Pippa Passes*, *A Blot in the 'Scutcheon*, *Colombe's Birthday*, and *In a Balcony*; the translations, *The Agamemnon of Aeschylus*, and *Balaustion's Adventure*; and Browning's masterpiece, *The Ring and the Book*. These works are studied for their literary and philosophical values, as showing the development of Browning as man, poet, and philosopher, and as a reflection of certain phases of nineteenth-century life and thought.

Credit: 2 semester-hours

ENGLISH 516. *Language Problems in the English Curriculum*

This course reviews the several theories of language and studies the problem of meaning in order to arrive at a suitable technique for the interpretation of prose and verse. This technique is then applied to the problems of reading, of composition, of speech, and of appreciation of literature. The course has two aims: to increase the student's own skill in dealing with language, and to increase his effectiveness in teaching.

Credit: 2 semester-hours

ENGLISH 517. *Recent Research and Experiment in the Teaching of English*

This course analyzes and evaluates current research in the fields of language, literature, and composition relevant to the teaching of English in the high school, and examines critically recent experimentation in methods of teaching English. The aim of the course is to make available to the student any recent knowledge and experience which may throw light on the problems of English teaching in secondary schools and to evaluate tendencies in this field. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 518. *The Major Romantic Poets*

This course studies the work of Coleridge, Wordsworth, Scott, Byron, Shelley, and Keats. It devotes especial attention to the poems which are best adapted for the reading of high school students.

Credit: 2 semester-hours

ENGLISH 519. *English in the Modern High School*

This is a seminar in which the methods and materials requisite to the development of a program in the language arts (listening, speaking, reading, and writing) are considered.

Credit: 2 semester-hours

ENGLISH 520A and 520B. *Great Books on Education*

Students examine the classics dealing with educational theory and practice which they so often read about but rarely consult: Plato's *Republic*, Xenophon's *Cyropaedia*, Cicero's *De Oratore*, Castiglione's *The Courtier*, Machiavelli's *Prince*, Rabelais's *Abbey of Theleme*, Ascham's *Schoolmaster*, Bacon's *Novum Organum*, Defoe's *Projects*, Milton's *To Samuel Hartlib on Education*, Rousseau's *Emile*,

Byron's *Don Juan*, Hughes' *Tom Brown's Schooldays*, Newman's *Idea of a University*, the Arnold-Huxley debates, and the works of John Dewey and Jacques Barzun. This course is recommended for graduate students in the Department of Integration.

Part A—Plato to Rousseau.

Part B—Rousseau to Dewey.

Credit: 2 semester-hours each

ENGLISH 521. *English Literature of Social Problems*

This course surveys English literature from 1800 to 1914, and the principal authors discussed include Shelley, Dickens, Kingsley, Tennyson, Carlyle, Butler, Meredith, Galsworthy, Bennett, Shaw, and Wells.

Credit: 2 semester-hours

ENGLISH 522. *Advanced Phonetics*

This course provides ear-training to develop skill in recognizing and distinguishing a-typical English speech sounds, regional differences in pronouncing American English, and foreign sounds heard in English speech. This is followed by extensive practice in transcribing speech sounds into International Phonetic Alphabet symbols and in reading International Phonetic Alphabet transcriptions. A thorough study of the speech characteristics of some geographical region with which the student is personally familiar is required of each student.

Credit: 2 semester-hours

ENGLISH 524. *Five Great Books*

The aim of this course is to broaden and to deepen the student's general cultural perspective by a study of five books which have profoundly influenced present civilization. The actual choice of texts is a cooperative class enterprise. Selections are made from such books as: *The Bible*, Homer's *Odyssey*, Plato's *Republic*, Shakespeare's *Hamlet*, Rousseau's *Confessions*, Goethe's *Faust*, Tolstoy's *War and Peace*, Dewey's *The School and Society*. This course is designed to provide leadership in local "Great Books" meetings.

Credit: 2 semester-hours

ENGLISH 525. *The Development of the American Novel*

The American novel as a contemporary art form is examined in this course. Beginning with the novels of the early nineteenth century the course traces the rise and development of the Romantic and the Realistic novel and concludes with an example of American Naturalism. Written criticism of five novels is required.

Credit: 2 semester-hours

ENGLISH 528. *New Perspectives in World Literature*

The point of view of our own democratic culture is surveyed and established in an attempt to see how the literatures of Western Europe, the Middle East, and the Orient have influenced and are influencing modern thinking. Such perspectives are designed to provide adequacy in teaching a world point of view through literature.

Credit: 2 semester-hours

ENGLISH 530. *Dante and His Influence in England and America*

Fully two-thirds of the time of this course is devoted to rereading and reassessment of Dante himself in English translation. When Dante's meaning has been revealed, his continued influence from Chaucer through Sackville, Spenser, and Milton to Rossetti, Longfellow, and T. S. Eliot becomes the subject of investigation.

Credit: 2 semester-hours

ENGLISH 531. *Seventeenth Century Literature*

This course aims to give students an appreciation of the prose style and intellectual content of the best thinkers and writers of the first "modern" century—Bacon, Burton, Walton, Bunyan, Hobbes, Pepys, Dryden; and of the poetic art of Donne and the "Metaphysicals"—Jonson, Herrick, and the "Cavaliers"—Herbert, Cowley, Vaughan, Dryden, and others.

Credit: 2 semester-hours

ENGLISH 532. *The Victorian Novel*

This is an intensive study of the novel in Victorian England. A review of the development of the English novel before this period is followed by studies in the works of Dickens, Thackeray, Austen, Eliot, Trollope, Meredith, and Hardy. Novels studied in the high school are treated professionally in class.

Credit: 2 semester-hours

ENGLISH 533. *Masters of American Literature*

Significant American writers, including Irving, Hawthorne, Poe, Emerson, Melville, Whitman, and Mark Twain, are studied to discover their contributions to American life and to reveal important forces in our national background.

Credit: 2 semester-hours

ENGLISH 534. *Medieval Epic, Saga, and Romance*

This course deals with the chief medieval epics, sagas, and romances from the literature of England, France, Germany, Ireland, Iceland, Wales, and Italy in modern English translation. Attention is given both to those narratives which reflect the life of a particular country and to those which are international and express more generally the spirit of medieval Europe.

Credit: 2 semester-hours

ENGLISH 535. *Eighteenth Century Literature*

Major essayists, poets, dramatists, novelists, and letter writers are read and evaluated in terms of the thought, life, and literary movements of their own time and of their significance for the present generation. Authors studied include Addison, Steele, Defoe, Swift, Goldsmith, Sheridan, Gray, Johnson, Boswell, Cowper, Richardson, Fielding, Sterne, Smollett, and Burke. High-school classics receive special attention.

Credit: 2 semester-hours

ENGLISH 536. *Philosophy of Great Literature*

By studying one or two masterpieces in a given semester this course aims to help the student develop a plan of study to achieve a systematic understanding of the philosophic world-views and life-views implicit in such works as: Aeschylus's trilogy, *The Oresteia*; Plato's *Timæus*; Boethius's *Consolations of Philosophy*; Dante's *Divine Comedy*; Shakespeare's *Hamlet*; Milton's *Paradise Lost*; Pascal's *Pensées*; Goethe's *Faust*; Blake's *The Marriage of Heaven and Hell*; Dostoevski's *Brothers Karamazov*; Mann's *The Magic Mountain*; Hesse's *Demian*; Henry Adams's *Mont St. Michel and Chartres*; the *Bhagavad-Gita*; Lao-tse's *The Book of Tao*; and Auden's *Collected Poetry*.

Credit: 2 semester-hours

ENGLISH 537. *American Drama in American Democracy*

This course studies the part played by American drama in the evolution of American democracy from the eighteenth century up to the contemporary period.

Credit: 2 semester-hours

ENGLISH 538. *American Literature of Social Problems*

This course surveys the American literature which presents social problems during the period from 1800 to 1914 in an attempt to discover the attitudes of the various authors toward these problems.

The works of such authors as Cooper, Lowell, Thoreau, Whitman, Howells, Bellamy, Garland, and Glasgow are studied from this point of view. Enough of the social background of the period is discussed to give the necessary perspective for the discussion of the literature, but the emphasis is placed on the reflection of the problems in literature and not merely on the problems themselves.

Credit: 2 semester-hours

ENGLISH 539. *Theatre and Society*

Dramatic expression from the time of the ancient Greeks to the present is studied carefully to analyze social, political, and ethical trends as they are reflected in the drama. The members of the course prepare analyses of social trends in contemporary drama. This research provides the basis for reports given during the latter part of the course.

Prerequisite: ENGLISH 102 or its equivalent.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

ENGLISH 401. *The Teaching of English in Secondary Schools*

Students are taught to develop and use materials of the classroom: lesson plans and units of work are prepared and presented for criticism, textbooks are analyzed for training in their use, and bulletin board exhibits and visual education materials are prepared by students for the class. Observation and criticism of teaching in the College High School, and criticism of student compositions are required.

Credit: 3 semester-hours

ENGLISH 401X. *The Teaching of English in Secondary Schools*

Students are taught to develop and use materials of the classroom; lesson plans and units of work are prepared and presented for criticism; textbooks are analyzed for training in their use; and bulletin board exhibits and visual and auditory aids are prepared by students for the class.

Credit: 2 semester-hours

ENGLISH 402. *Survey of British Literature to 1798*

This course draws together into a systematic narrative the story of the development of English literature from the beginnings to the romantic triumph of 1798.

Credit: 4 semester-hours

ENGLISH 404. *Survey of British Literature*

This course is a continuation of English 402. It takes up the story with the romantic triumph in 1798 and continues it to the present time.

Credit: 2 semester-hours

ENGLISH 406. *The Modern Novel*

Particular emphasis is given to British and American novels since 1870, and the important tendencies of present-day prose fiction are explored.

Credit: 2 semester-hours

ENGLISH 407. *British and American Biography*

Both the old and new types of biography are read and studied in this course, with emphasis upon the nineteenth and twentieth centuries.

Credit: 2 semester-hours

ENGLISH 408. *Creative Writing*

Students in this course attempt seriously the standard literary forms in prose and verse.

Credit: 2 semester-hours

ENGLISH 409. *The Teaching and Appreciation of Poetry*

This course is both personal and professional. It develops the student's appreciation of poetry as an expression of life and as a form of art, and it considers in detail the aims and methods of teaching poetry.

Credit: 2 semester-hours

ENGLISH 410. *Speech Pathology*

This course deals with diagnostic and corrective procedures, causes and treatment for major or pathological speech problems including severe stuttering, voice disorders, laryngectomy, cleft-palate, cerebral palsy, and aphasia. This course is required to teach speech and speech defectives.

Prerequisites: ENGLISH 208 and 209

Credit: 2 semester-hours

ENGLISH 413. *Modern Poetry*

This course deals with the work of contemporary poets, both British and American.

Credit: 2 semester-hours

ENGLISH 417. *Methods in the Teaching of Speech*

In this course a study is made of the objectives of speech education at each grade level; of the problems, approaches, materials, textbooks, and techniques in specific speech areas; of modern trends in instruction; and of the integration of speech with other academic departments of study. This course is required to teach speech.

Credit: 3 semester-hours

ENGLISH 419. *Grammar for Teachers*

This course is a study of the basic facts of grammatical relationships in English, and of the current problems of "rules" as opposed to "usage." The primary aim of the course is to acquaint students with the true function of grammar in speech and writing.

Credit: 2 semester-hours

ENGLISH 420. *High School Classics*

This course is a seminar for prospective student teachers on the problem of teaching literature in high schools. The student reads numerous articles on the "classics" vs. the "moderns" controversy, becomes thoroughly acquainted with the contents and aims of the best high school anthologies currently in use, and builds up a working philosophy for his own teaching. Through the continued practice of reporting and discussion leading, the student is enabled to integrate his total experience in college.

Credit: 2 semester-hours

ENGLISH 421. *The Short Story*

This course traces the history of the short story as an evolving literary form, emphasizing the productions of the nineteenth and twentieth centuries.

Credit: 2 semester-hours

ENGLISH 428. *The Film and Society*

This course considers the impact of the motion picture on our culture. The film is studied and evaluated as a powerful social and educative force, as an art form, and as an entertainment medium. The origin and development of film techniques are treated, and films are

shown at each session, accompanied by analysis and discussion. The scenario as a literary type and the adaptation of prose fiction for film purposes are included in the course content. A laboratory fee of \$5.00 to cover the cost of film rentals accompanies this course.

Credit: 2 semester-hours

ENGLISH 430. *Reading in Secondary Schools*

After examination of recent research concerning reading activities at various age levels, the class examines and evaluates methods devised to develop reading skills, to increase vocabularies, and to improve the comprehension of secondary school students.

Credit: 2 semester-hours

ENGLISH 431A and 431B. *Shakespeare*

This course, in two parts, presents all of Shakespeare's plays as opposed to those taught only in high school, which is the chief concern of English 301B. Here the poet's full development can be seen, providing a complete critical experience. Critical analysis, contentual evaluation, and textual problems are the main areas of concern. Part A deals with tragedies; Part B, the comedies. The chronicle plays are woven into the discussion.

Credit: 2 semester-hours each

ENGLISH 432. *The Development of the Drama*

The development of the drama is studied in all periods from ancient Greece and Rome through the Middle Ages and the Renaissance to the beginning of modern drama with Ibsen. The emphasis of the course is placed on the major characteristics of the drama and its necessary complement, the theatre. Representative plays are read and discussed.

Credit: 2 semester-hours

ENGLISH 435. *Stagecraft*

This workshop course provides training in construction and painting of scenery and lighting the stage. A minimum of twelve clock hours of craft work upon a production of the College or College High School is required for credit in this course.

Credit: 2 semester-hours

ENGLISH 439. *Contemporary American Literature*

This course studies the major authors and literary movements in America during the contemporary period. Beginning where the course in *Masters of American Literature* normally ends, it is designed to complete a unit in this subject.

Credit: 2 semester-hours

ENGLISH 442A and 442B. *American Literature*

This chronological survey reflects the interplay of life and letters in the American scene, examining the political, social, and ethical motivations of the great movements in literature, and reading the separate works in the light of the influences that brought them into being. Part A commences with the Puritan Tradition and ends just as the Civil War is beginning. Part B traces, in life and in literature, the growth of the great democratic tradition in America.

Credit: 2 semester-hours each

ENGLISH 443. *Modern Drama*

An historical survey of trends, dramatists, plays, and accomplishments from Ibsen to the latest prize plays on Broadway provides background for this course.

Credit: 2 semester-hours

ENGLISH 446. *The One-Act Play*

This course studies the one-act play as an art form, devoting special attention to plays which are suitable for high school production.

Credit: 2 semester-hours

ENGLISH 448. *Choral Speaking*

As members of a speaking choir, students acquire skill in interpreting various forms of literature suitable for group treatment.

Credit: 2 semester-hours

ENGLISH 449. *Public Speaking*

This is an advanced course in the theory and practice of public speaking. It provides opportunity for training in the more complex speech skills, especially in the techniques of leadership in speech situations and the techniques for making speech responses in co-operative situations.

Prerequisite: ENGLISH 204 or the equivalent

Credit: 2 semester-hours

ENGLISH 451. *Literature and Art in Western Culture*

This course deals with the nature of literature and considers its importance as a factor in the development of international understanding. It deals with the relation between the use of language in literature and with the methods of art, since the re-creation of

experience is a function common to both. Through reading the literature which is being read by our neighbors today, both in Europe and in the Western Hemisphere, students are able to participate in a common experience with them.

Credit: 2 semester-hours

ENGLISH 454. *Training the Speaking Voice*

This is a course in the study of the problems of speech, the development of a pleasing speaking voice with precision in diction, and the application of speech skills to practical speaking situations.

Credit: 2 semester-hours

ENGLISH 455. *Reading Interests of High School Students*

Through wide reading, study and preparation of bibliographies, and establishing criteria for judging current books, the student is prepared to guide the recreational reading of junior and senior high school students. Credit cannot be given for both English 301A and 455.

Credit: 2 semester-hours

ENGLISH 456. *Play Direction*

This course covers the choosing and casting, as well as directing, of plays. Scenes are directed for class criticism, and a detailed prompt-book of one play is prepared. This course complements English 435.

Credit: 2 semester-hours

ENGLISH 457. *Workshop in Speech Activities*

It is the purpose of this course to prepare students to organize and to conduct assembly programs, PTA demonstrations, and similar activities. Class lectures and discussions cover all phases of the director's responsibilities. Groups conduct research on suitable program materials and share their findings with classmates. Each student prepares a list of programs of various types which he could present during a school year.

Credit: 2 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

Some of the contributions which have gone into the making of Chinese literature, such as the *Book of Odes* of Confucius, the poems of Li Po and Tu Fu, the Lute Song, and the Dream of the Red Chamber, are considered in this course. Aside from a general survey

of the great literature of China special attention is given to English translations of the masterpieces of Chinese literature. There are twenty-four hours of lectures in the morning; after lunch each day a period of forty-five minutes is devoted to informal talks, story-telling, singing of Chinese songs, and showing of motion pictures. During the workshop period individual students work on specific topics under the guidance of the instructor.

Prerequisite: SOCIAL STUDIES 499—*Introduction to Chinese Culture*

Credit: 3 semester-hours

ENGLISH 461A. *Speech Laboratory Practice*

After the techniques of interviewing, of preparing case histories, of diagnosing speech disorders, of planning therapies, and of determining prognoses have been taught through lectures and demonstration lessons, each student is assigned one or more persons with speech defects for supervised practice in correcting speech disorders. Credit is given on a laboratory basis, and the course meets three hours weekly. This course is required for the teaching of speech defectives.

Credit: 2 semester-hours

ENGLISH 461B. *Advanced Speech Laboratory Practice*

This course provides for additional supervised speech correction practice with adults or children with speech disorders. Credit is given on a laboratory basis, and the course meets three hours weekly.

Credit: 2 semester-hours

ENGLISH 462. *Group Discussion and Leadership*

Students are taught the principles of democratic discussion and methods for guiding the committee meeting, panel symposium, lecture, and debate forums. Frequent opportunities to apply these principles and methods are given through discussion of topics chosen by the class.

Credit: 2 semester-hours

ENGLISH 463. *Audio-Visual Aids in Teaching Speech*

The aim of this course is to equip prospective teachers to understand the desirable characteristics; capabilities; and all possible uses of charts, models, projection equipment, and magnetic and disc

recorders available for the teaching of speech. The distribution, cost, operation, servicing, and storing of instruments and of supplies are also considered.

Credit: 2 semester-hours

ENGLISH 464. *Speech Psychology*

The mental processes involved in acquiring language and in using it in effective oral communication are reviewed. Problems involving psychological principles as they apply to oral teaching, to audience leadership and control, to the alleviation of stage fright, and to the teaching of speech improvement are considered along with the principles of general semantics.

Credit: 2 semester-hours

ENGLISH 465. *Speech Arts Activity*

Each speech major is required to earn at least one semester-hour of credit in some supervised speech arts activity, such as: playing a major role in a major production; directing a three-act play or its equivalent; giving a public play reading or lecture recital; directing a series of assembly programs; or directing and producing a series of radio programs.

Credit: 1 semester-hour

ENGLISH 466. *Speech Development: Improvement and Reeducation*

This course is intended for superintendents, principals, and classroom teachers who have little or no background in speech education. Consideration is given to the following topics: (1) speech development; (2) speech difficulties or problems found on the kindergarten, elementary, and secondary school levels; (3) acquisition of good voice and speech characteristics; (4) use of techniques and materials in classrooms to motivate good speech patterns; and (5) ways of setting up and integrating speech education in school systems. Demonstrations with individuals and groups are made, and students are expected to prepare a practical project.

Credit: 2 semester-hours

ENGLISH 467. *Oral Interpretation for the Teacher*

This course is organized as a laboratory to help the teacher develop his potentialities in oral reading. Each student is given many opportunities to read aloud and to participate in informal critiques. Assistance is given in compiling a repertory of selections most useful in daily teaching.

Credit: 2 semester-hours

DEPARTMENT OF FOREIGN LANGUAGES

In answer to the growing demand for graduate work, the Foreign Language Department offers a program based on STUDY ABROAD. Through personal contact and experience, the student, thus, can increase both his knowledge and understanding in respect to the people whose language he is preparing to teach. This means that the student will do part of his graduate work at a selected college in a country where the language of his major is spoken. To assist with this program of STUDY ABROAD, the Foreign Language Department yearly offers scholarships for qualifying applicants. These scholarships are sustained by a Student Exchange Fund. Students who are interested in obtaining a STUDY ABROAD scholarship should consult with the Head of the Department for particulars. Sixteen semester-hours of graduate credit are granted for this work. The remaining sixteen hours necessary for the Master's degree are to be selected from graduate courses offered at Montclair. There is also required a final comprehensive examination in the student's major field. The following plan outlines the work for a Master's degree in the Department of Foreign Languages:

<i>Required Courses</i>		<i>Credits</i>
French 502	<i>Study Abroad</i>	16 semester-hours
or		
Spanish 502	<i>Study Abroad</i>	16 semester-hours
Integration 503	<i>Methods and Instruments of Research</i>	2 semester-hours
<i>Electives</i> (To be selected in consultation with the Head of the Foreign Language Department)		
Integration courses		4 semester-hours
Graduate courses in other departments of the college		10 semester-hours
Total		32 semester-hours

Final comprehensive examination in major field of foreign language.

FRENCH 502. *Study Abroad*

Credit: 16 semester-hours

SPANISH 502. *Study Abroad*

Credit: 16 semester-hours

The third experience in metal and power areas. The metal area includes activities in low pressure welding, and mass production techniques in auto mechanics, power saws, and other combustion engines, mechanical power, etc.

Credit: 1

(1) instruction in Administration

M. degree and New Jersey certification for one or more of the following positions: (1) instruction in Administration leading to the A. M. degree and New Jersey certification for positions of Subject Supervisor, General Supervisor, Elementary School Principal, Secondary School Principal, Supervising Principal, Superintendent; (2) instruction in Personnel and Guidance leading to the A. M. degree and New Jersey certification for positions of Personnel Supervisor, Guidance Counselor; and (3) instruction in advanced professional courses for positions of School Superintendent, District Superintendent, or State Superintendent.

Of the above objectives most graduate courses in the field of Integration are designed for students who are having teaching experience. Other courses presuppose at least a teaching certificate. Enrollment in graduate Integration courses, is subject to the following restrictions:

Students Who Do Not Have a Teaching Certificate—Graduate students in this classification may enroll in undergraduate and graduate (400 level) courses in order to meet certification requirements. They also may enroll in the following graduate Integration courses: 500A, 500B, 500C, 505, 540, 551, and 552. (These courses are designated in the options below by a single asterisk *.) No more than eight semester-hours in courses taken prior to matriculation may be counted toward the A.M. degree.

Graduate Students Who Possess a Teaching Certificate But Have No Teaching Experience—Students in this classification may enroll for any of the courses listed in the previous paragraph and also Int. 500D, 500E, 500F, and 503. (These optional courses are designated below by a double asterisk **.) They may count no more than eight semester-hours in courses earned prior to matriculation for the A. M. degree.

Students Matriculated for the A. M. Degree—Graduate students working toward an A. M. degree in either the field of Administration and Supervision or Personnel and Guidance are permitted to matriculate only when they are having or have teaching experience. Students majoring in Personnel and Guidance are required to have two years of teaching experience before the degree can be conferred.

Students who plan to remain classroom teachers are not encouraged to seek an A. M. degree in either the field of Administration and Supervision or Personnel and Guidance.

Credit: 1; semester - hours

This course presents laboratory experience operated under the principles and philosophy of a general shop, with the possibility of utilizing all of the available shop facilities. Each student has the opportunity to elect the areas of work he is interested in and to plan a general shop program accordingly.

advanced work in these
ing, foundry, machine shop,
es. The power area involves
board motors, diesels and
power, and hydraulics.

4 semester -- hours

5. Courses in the teaching of elementary school subjects are offered primarily to help graduate students to complete certification in this field. Such courses may be counted toward an A. M. degree only under certain conditions which are outlined by the Integration Department graduate adviser.

I. COURSE REQUIREMENTS FOR THE A. M. DEGREE IN ADMINISTRATION AND SUPERVISION

- A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience. (Not more than eight semester-hours will be counted toward this degree prior to the obtaining of this certificate and the beginning of this experience.)
- B. Satisfactory completion* of not fewer than 32 semester-hours as follows:

1. Basic Requirements	S. H.
Int. 500A. <i>Basic Educational Trends</i>	2
Int. 500D. <i>School Administration I. Functions, Organization</i>	2
Int. 500E. <i>School Administration II. Law and Finance</i>	2
Int. 500F. <i>School Administration III. Community Relations</i>	2
Int. 503. <i>Methods and Instruments of Research</i>	2
either 2. For Specialization in Secondary Education	
Int. 508. <i>Supervision of Instruction in Secondary Schools</i>	2
Int. 502. <i>Organization and Administration of the Modern High School</i>	2
Int. 504A. <i>Curriculum Construction in the Secondary School</i>	2
or 2. For Specialization in Elementary Education	
Int. 517. <i>Administration of the Elementary School</i>	2
Int. 518. <i>Supervision of Instruction in Elementary Schools</i>	2
Int. 548. <i>Curriculum Construction in the Elementary School</i>	2
3. Electives in Integration	
The student with his adviser's approval will select a minimum of 8 semester-hours in additional Integration courses numbered 400 or above.	
	8-16
4. Electives in other departments	
A student may count toward the degree not more than eight semester-hours in other departments of the College. He is encouraged to elect courses which will broaden his interests and background.	
	0-8
Total	32

NOTES:

1. Graduates from New Jersey State Teachers Colleges may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Chairman of the Graduate Committee.

*In exceptional cases appropriate substitutions or changes, approved by the department head, may be made in these requirements.

2. Students who are interested in obtaining principals' or supervisors' certificates may obtain mimeographed lists of the courses which will be counted toward these certificates.

II. COURSE REQUIREMENTS FOR THE A. M. DEGREE IN PERSONNEL AND GUIDANCE

- A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience. (Not more than eight semester-hours will be counted toward this degree prior to the obtaining of this certificate and the beginning of this experience.)

- B. Satisfactory completion of not fewer than 32 semester-hours as follows:

1. Basic Requirements (Total of 20 semester-hours)	S. H.
Int. 500F. <i>Community Relations</i>	2
Int. 503. <i>Methods and Instruments of Research</i>	2
Int. 520. <i>Principles of Mental Hygiene</i>	2
Int. 521A. <i>Educational and Psychological Measurement in Guidance</i>	2
either Int. 500B. <i>Advanced Educational Psychology</i>	2
or Int. 550. <i>Child and Adolescent Development</i>	
Int. 551. <i>Principles and Techniques of Guidance</i>	2
Int. 535. <i>Vocational Guidance</i>	2
Int. 536. <i>Educational Guidance</i>	2
Int. 537. <i>Social-Moral Guidance</i>	2
Int. 538. <i>Group Guidance and Counseling Activities</i>	2
2. Primary Electives (Minimum of 4 semester-hours required)	
Int. 602. <i>Seminar in Guidance</i>	4
Int. 505. <i>Organization and Administration of Extra-Curricular Activities</i>	2
Int. 530A. <i>Corrective and Remedial Reading in Secondary Schools</i>	2
Int. 521B. <i>Psychological Tests in Guidance Programs</i>	2
Eng. 466 <i>Speech Development: Improvement and Re-education</i>	2
3. Secondary Electives (Maximum of 8 semester-hours permitted)	
Courses in related and unrelated subjects in other departments of the College	
Math. 400. <i>Educational Statistics</i>	2
Soc. St. 439. <i>The Family and Its Problems</i>	2
Soc. St. 443. <i>Youth and the Community</i>	2
Soc. St. 444. <i>The Social Bases of Human Relations</i>	2
Soc. St. 450. <i>Modern Economic Problems</i>	4
Eng. 464. <i>Speech Psychology</i>	2
Int. 409. <i>Radio and Sound Equipment in the Classroom</i>	2
OR any other courses in the graduate program	

Total

32

NOTE:

1. Graduates from New Jersey State Teachers Colleges may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Chairman of the Graduate Committee.

GRADUATE COURSES

*INTEGRATION 500A. *Basic Educational Trends*

This course deals with the historical background which administrators and supervisors, as well as teachers, need in order to evaluate problems and policies in due perspective. It emphasizes the current trends in American society and their bearing upon education. It also considers philosophies concerning the causes of rises and declines in outstanding civilizations and the part education could play among them.

Credit: 2 semester-hours

*INTEGRATION 500B. *Advanced Educational Psychology*

The course covers the various aspects of growth. Individual differences, their measurement, and their bearing on educational practices and principles furnish topics of study and discussion. Principles and laws of learning are reviewed. Some time is given to problems of personality as encountered in school work. The several points of view which have been prominent in the psychology of the past fifty to seventy-five years are examined for their contributions to thinking about human nature.

Prerequisite: An introductory course in psychology.

Credit: 2 semester-hours

*INTEGRATION 500C. *Recent Trends in Secondary School Methods*

This course emphasizes the fundamental principles underlying the technique of teaching on the secondary school level. Some of the topics considered are: organization of knowledge, the logical and psychological aspects of method, developing appreciations, social-moral education, teaching motor control, fixing motor responses, books and verbalism, meeting individual differences, guidance in study, tests and examinations, marks and marking.

Credit: 2 semester-hours

**INTEGRATION 500D. *School Administration I: Functions and Organization*

This introductory course in educational administration is concerned with general functions and personnel, as well as with the general organization, of public education on local, State, and national levels. It deals also with Federal-State relations, the State and sectarian education, the expanding scope of modern school systems, types and bases of school organization, and professional ethics.

Credit: 2 semester-hours

****INTEGRATION 500E. *School Administration II: Law and Finance***

This course acquaints the student with the allied fields of school law and school finance, with special reference to New Jersey. Its topics include basic principles of public school support, taxation, Federal aid, educational finance, legal provisions for school district borrowing, tenure provisions, and rights and duties of school boards and officials.

Credit: 2 semester-hours

****INTEGRATION 500F. *School Administration III: Community Relations***

This course concerns the relation of the school to other educational efforts of the community. It considers the scope and types of agencies and informal influences of an educational nature, and also the agencies and methods by which the best total co-operative effort can be attained. It deals also with methods and plans of publicity. Constant reference throughout is made to New Jersey localities.

Credit: 2 semester-hours

INTEGRATION 502. *Organization and Administration of the Modern High School*

The following topics are considered: the student personnel, building and revising the high school curriculum, providing for individual differences, making the school schedule, records, the guidance program, pupil participation in government, the extra-curricular program, the health program, the safety program, discipline, library and study hall, cafeteria, the principal's office, and evaluating results.

Credit: 2 semester-hours

****INTEGRATION 503. *Methods and Instruments of Research***

This course is required of all candidates for the Master's degree without regard to their field of major interest. Its purpose is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student sets up a problem and plans and carries out its solution. It is recommended that this course be taken early in the graduate program.

Prerequisite: MATHEMATICS 400 or equivalent

Credit: 2 semester-hours

INTEGRATION 504A. *Curriculum Construction in the Secondary School*

The purpose of this course is to introduce the student to constructive criticism of American culture, to consider the extent to which the secondary school curriculum meets the needs of a changing civilization, and to consider effective means of curriculum construction.

Credit: 2 semester-hours

INTEGRATION 504B. *Seminar in Curriculum Organization*

This course is for students actively engaged in problems of curriculum reconstruction and those who are anticipating committee work in this field. It concerns both the elementary and secondary levels. The work is conducted under seminar or individual guidance, and the hours for the conferences will, therefore, be arranged personally between the student and the instructor. (INTEGRATION 504A or INTEGRATION 548 is prerequisite to this course.)

Credit: 2 semester-hours

*INTEGRATION 505. *Organization and Administration of Extra-Curricular Activities*

The first part of this course considers such general problems of extra-curricular activities as: their growing importance; their relation to the curriculum; the principles underlying their organization, administration, and supervision; and methods of financing. In the second part, an intensive study is made of the home room, the assembly, the student council, clubs, athletics, school publications, and other activities in which the class is especially interested.

Credit: 2 semester-hours

INTEGRATION 508. *Supervision of Instruction in Secondary Schools*

This course emphasizes the more practical phases of supervision which are met most frequently by those engaged in it. Among the topics are: the set-up for adequate supervision, supervision as encouraging and guiding the growth of teachers and the improvement of educational procedures, the supervisory functions of teachers' meetings, discussion groups, general and professional reading, the writing of articles, co-operative curriculum modification, utilization of community resources, and teacher intervisitation.

Credit: 2 semester-hours

INTEGRATION 510. *Seminar in Secondary Administration and Supervision*

In this course the class makes an intensive study of administrative and supervisory problems suggested by the educational events and trends of the year, by the interests and responsibilities of the members of the class, and by educational movements in New Jersey and the country. Each student does an individual piece of research which he reports to the class. This represents advanced work which depends upon previous study or experience in educational administration or supervision. (Prerequisites: INTEGRATION 502 or 601A, and 508 or 601B.)

Credit: 2 semester-hours

INTEGRATION 517. *Administration of the Elementary School*

This course analyzes and evaluates the administrative duties and relationships of the elementary school principal. Particular consideration is given to: building management, effective use of the school plant, sanitation, health service, the library, personnel management, the administration of the curriculum, community relationships, and publicity.

Credit: 2 semester-hours

INTEGRATION 518. *Supervision of Instruction in the Elementary School*

This course has been planned for those engaged in the supervision of the elementary school, and for those who are preparing for such responsibilities. Principles of classroom supervision are developed and applied to learning situations. Among the more important topics that receive attention are: the nature and function of supervision, the organization necessary for effective supervision, the nature and significance of the teacher's purposes, the methods and techniques of group and individual supervision, the technique of observation, and the supervisory conference.

Credit: 2 semester-hours

INTEGRATION 520. *Principles of Mental Hygiene*

This course is designed to be a general survey of the principles and practices of mental health with special reference to the mental health of teacher and pupil. It involves a thorough grounding in fundamental principles of mental hygiene with much practical consideration of the mental-health values of instructional programs and procedures. Discussion centers in practical efforts to develop wholesome personalities in our schools.

Credit: 2 semester-hours

INTEGRATION 521A. *Educational and Psychological Measurement in Guidance*

This course deals with fundamentals of educational and psychological measurements in guidance: test theory, statistical concepts, test construction, evaluation, and interpretation. The place of tests in the instructional program is stressed.

Prerequisite: This course is open only to those with teaching experience.

Credit: 2 semester-hours

INTEGRATION 521B. *Psychological Tests in Guidance Programs*

This course is designed to familiarize the student with various psychological tests and scales that may be used in guidance programs in the secondary school. The student is given practice in administering many types of group tests. This includes scoring the tests and evaluating the results, with a discussion of ways in which these results may be used. Much time is spent in actual laboratory demonstrations of tests, giving students an opportunity to serve as subjects and as examiners. Class discussion is based upon first-hand information gained through use of the tests, on readings, and on class reports.

Prerequisite: INTEGRATION 521A

Credit: 2 semester-hours

INTEGRATION 529. *Field Work in Guidance*

The aim of the course is to introduce the student to various aspects of guidance through experience in agencies actually dealing with such problems. Students observe and participate in activities of the agencies to which they are assigned and write full accounts of these observations and experiences. Some time is spent in discussing and evaluating these experiences and relating them to the literature of the subject. Prerequisites are: experience in teaching; familiarity with the literature on all aspects of guidance and mental hygiene; and INTEGRATION 500B, 520, and 551. This work is conducted by seminar and individual guidance. The hours for the conferences are arranged personally by student and instructor.

Credit: 4 semester-hours

INTEGRATION 530A. *Corrective and Remedial Reading in Secondary Schools*

This course offers an investigation and interpretation of the reading problems which are found in secondary school classes. A study is made of the causes of reading difficulties, methods of diagnosis, and

techniques of remedial and corrective teaching. Particular attention is given to the selection and adaptation of suitable curriculum materials. Guidance is given to teachers with individual case problems of retarded, normal, and superior pupils. Illustrative material is taken from case studies developed by classroom teachers.

Credit: 2 semester-hours

INTEGRATION 530B. *Workshop in Corrective and Remedial Reading in Secondary Schools*

This course is designed for students who are directing or instituting programs of remedial and corrective reading and for those who are teaching individuals and classes in such programs. For the most part each student works intensively on his own teaching problem, receiving suggestions and recommendations as the work progresses. Some topics of common interest are: diagnosis, remediation, evaluation, organization and administration of reading programs; use and cost of materials and equipment; relation to the rest of the educational program of the school.

Prerequisite: INTEGRATION 530A or the equivalent, or considerable experience in remedial work

Credit: 2 semester-hours

INTEGRATION 532. *The Supervision and Teaching of Reading in Elementary Schools*

The place of reading in the entire elementary school program is analyzed. Attention is given to necessary remedial work for junior high school students. Materials and their use in instructional programs are studied with a view toward increasing power. All growth levels are considered. Good first teaching is of primary concern; however, the analysis and correction of certain reading difficulties constitute an important portion of the course.

Credit: 2 semester-hours

INTEGRATION 534. *Community Resources for Guidance*

This course deals with the various agencies, industries, and institutions available in the surrounding communities for use in guiding students. In addition to becoming familiar with the location and nature of these facilities students learn the techniques for arranging student interviews and visits. Class discussion and personal research are supplemented by field trips.

Credit: 2 semester-hours

INTEGRATION 535. *Vocational Guidance*

This course is intended for counselors in the junior and senior high schools to obtain information about the principles and philosophy of vocational education and the techniques of counseling youths who wish to receive pre-employment training, and for counselors of out-of-school groups who are attempting to make readjustments to occupational life. Attention is also given to guidance techniques for job preparation and readjustment, the matching of educational and personal abilities to job specifications, the effects of social legislation on the employment of youths, and a study of techniques used in determining occupational needs and occupational changes.

Credit: 2 semester-hours

INTEGRATION 536. *Educational Guidance*

This course is concerned with the facilities available for education after high-school graduation, the problem of further training for pupils leaving school before completing high school, and the academic problems of students while in school. A brief survey of colleges and college-admission procedures is made.

Credit: 2 semester-hours

INTEGRATION 537. *Social-Moral Guidance*

This course is concerned with the non-vocational and non-academic personal and social problems of pupils as well as with the development of techniques by which counselors can integrate the pupil's personal life with the mores and customs of society. It also includes a study of the possible services of various community agencies and a study of the counselor's relation to problems of discipline and citizenship education.

Credit: 2 semester-hours

INTEGRATION 538. *Group Guidance and Counseling Activities*

This course is concerned with the various techniques for helping individual pupils and for using group activities including role-playing as a guidance technique. The group activities considered include those of home rooms, activity periods, occupation courses, student field trips, placement follow-ups, college nights, and career days.

Credit: 2 semester-hours

*INTEGRATION 540. *Recreational and Activity Leadership*

It is the aim of the course to furnish each student with practical skills that are of service in dealing with young people of high school age. The practical side is supplemented by a thorough consideration of source material and theory. A partial list of the areas covered in the course follows: how to organize and handle groups, the use of leaders from within the group, indoor games, outdoor games, special hikes, outdoor cooking, camp-fire leadership. Special field trips are provided to observe camps and playgrounds in operation.

Credit: 2 semester-hours

INTEGRATION 548. *Curriculum Construction in the Elementary School*

This course offers an opportunity to review state and city elementary curricula; to discuss the principles of curriculum construction; to collect new teaching materials for the various subjects; and to evaluate, organize, and grade these materials. Teaching procedures in the use of materials are discussed and evaluated in terms of pupil needs, the objectives set up, and the results obtained. This course offers an opportunity to make a special study of the materials and procedures to be used in the supervision of the language arts.

Credit: 2 semester-hours

* INTEGRATION 550. *Child and Adolescent Development*

This course reviews the general characteristics of child and adolescent development: motor and physiological, social, emotional, language, intellectual, and interests and ideals. The influence of home, school, community, and institutional life on child and adolescent development are considered as well as problems of guidance presented by children in the normal course of development and also those presented by deviations from the normal course.

Credit: 2 semester-hours

* INTEGRATION 551. *Principles and Techniques of Guidance*

Topics included in this course cover: philosophy of guidance, history of the guidance movement, the need for guidance presented by children and adolescents. The methods of gathering useful data are studied, and school records, exploratory activities, tests, inventories, the case study approach, occupational information, and occupational data are treated as well as general methods of guidance with special stress on interviewing and counseling of students.

Credit: 2 semester-hours

* INTEGRATION 552. *The Junior College Curriculum*

This course considers admission requirements, requirements, course contents, and supplementary extracurricular activities of the junior college. As a background consideration of the principles underlying junior college is a brief treatment of the beginnings, aims and functions of organizations, and general trends of American junior colleges.

Credit :

INTEGRATION 553. *Core-Curriculum and Life-Programs in High Schools*

This course concerns two leading educational developments of the last decade after a discussion of their philosophy and precedents. The most significant school programs and programs put these developments into practice are presented in detail.

Credit :

INTEGRATION 601. *Workshop in Education*

Section A—Organizing and Administering the School

Section B—Supervising Instruction

Section C—Dealing with and Understanding the Individual

The workshop course enables the graduate student to work on a time to an educational topic or school problem of his own choice and to secure the help of the staff, fellow students, and facilities in pursuing this study. Members of the workshop meet together to discuss matters of common concern in the current school situation. In addition, the student works independently on his own subject and at times meets with other students interested in the same area.

In the past, students have worked on topics in such areas as problems in administration, guidance programs, extracurricular activities, school philosophies, problems in supervision, and community relations. The success of the workshop depends much upon the student knowing what he wants to study. Over a six-week period, the procedure being flexible enough to supply the student's needs. He must have his proposed problems for study approved by the director of the Workshop before he enrolls for the course.

The workshop is offered only in the summer session. It is given for one semester hours of credit or for two, the four calling for one semester hours of credit. The student taking the course for one semester hours of credit will have scheduled time in the course daily, the two calling for two scheduled time in the course. The student taking the course for two credits enrolls for one of the three fields: A—ad-

This course surveys current practices and problems in the education of children with physical, mental, and emotional handicaps, and of gifted children. It is designed for teachers, counselors, supervisors, and administrators who may work with one or more such children or who may wish to prepare for school and community leadership in developing facilities for exceptional children.

Credit: 2 semester-hours each

supervision, or C—guidance. The student taking it for four credits may do all the work in one of these three fields, or he may enroll for two hours credit in one and two in another.

Credit: 2 or 4 semester-hours

INTEGRATION 602. *Seminar in Guidance*

This course is designed to provide a laboratory situation for the exploration and study of the present practices with respect to the three major phases of the guidance program. Usually this seminar is given in conjunction with either Vocational (INTEGRATION 535), Educational (INTEGRATION 536), or Social-Moral (INTEGRATION 537) Guidance. The major portion of the time is spent on field trips, in private investigation, and in research.

Prerequisites: INTEGRATION 551, and have taken or be taking in conjunction one of the courses of major emphasis listed above

Credit: 4 semester-hours

INTEGRATION 603. *Principles and Practices of Research*

The purpose of this course is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student selects a problem and begins the research which will be completed the second semester.

Prerequisite: MATHEMATICS 400 or equivalent

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

Most of the following courses are set up to serve graduate students as well as College seniors. To carry graduate credit, the course in question must be approved by the candidate's adviser. In all instances, INTEGRATION 406, INTEGRATION 409, and INTEGRATION 410 will be accepted as work for either of the two graduate degrees in this department. For a more complete description of these courses see the undergraduate catalog.

INTEGRATION 400A. *Principles and Philosophy of Secondary Education*

This course evaluates educational objectives, techniques, procedures, and organizations in relation to the needs and demands made upon the school by society and by the student.

Credit: 2 semester-hours

INTEGRATION 400B. *Practicum in Secondary Education*

This course follows the student-teaching. It makes use of the teaching problems encountered by the students in the preceding twelve weeks, as well as similar problems reported by students in former years.

Credit: 2 semester-hours

INTEGRATION 406. *Educational Sociology*

This course deals with the application of sociological principles to educational problems. The school is treated as a part of the community, and the various social forces that affect the school and its administration are considered.

Credit: 2 semester-hours

INTEGRATION 407A. *Television in Education Workshop: Programming and Production*

This is a laboratory course designed to develop the techniques, methods, standards, procedures, and criteria pertaining to the special place of television in education. Through the utilization of studio equipment together with the resources of all the academic departments of the college, student potentialities, campus life, and the community, students receive experience in planning, developing, and producing, television programs of educational value. Actual training is given in the use of standard television equipment on campus, and field trips are made to local television laboratories and studios.

Credit: 2 semester-hours

INTEGRATION 407B. *Television in Education Workshop: Classroom Utilization*

This course is designed to give training in the following areas of television education: types of programs best suited for classroom use; practical applications of programs emanating from commercial stations; various subject areas in which television might be used such as language, science, art, social studies, etc.; script writing; coordination of program and school schedules; and the possible use of educational television stations and how they best serve surrounding communities. Students are also introduced to the operation of both sending and receiving television equipment so that they may understand program possibilities and limitations.

Credit: 2 semester-hours

INTEGRATION 408. *Selection and Utilization of Audio-Visual Materials*

Sources, selection, and evaluation of audio-visual aids are studied in this course. Techniques in developing individual reference catalogs of audio-visual aids are stressed.

Credit: 2 semester-hours

INTEGRATION 409. *Radio and Sound Equipment in the Classroom*

This course trains teachers and school executives in the use of radio programs, amplifying systems, recording equipment, and record players. Actual practice is given in the use of these educational aids. Problems of script-writing, microphone and recording techniques, and program directing are considered.

Credit: 2 semester-hours

INTEGRATION 410. *Teaching Materials Workshop*

This course is for those persons who wish to study advanced problems in the utilization and administration of audio-visual materials. Individual research is stressed, and there is an opportunity to work out individual projects.

Credit: 2 semester-hours

INTEGRATION 411. *Educational Motion-Pictures Workshop*

This course includes various phases of the planning and production of educational motion pictures. Students receive actual experience in scenario writing, costume research, set designing, lighting, photography, editing, and sound recording. During the course an educational film is produced as a class project.

Credit: 2 semester-hours

INTEGRATION 420A and 420B. *The Community Centered School*

This course deals with the development and functions of the school as a community resource. Students assemble and interpret data relating to actual school and neighborhood situations. Consideration is given to the social framework in which the school operates; racial and national minorities; intercultural education; truancy and delinquency; and the discovery and utilization of community resources. The use of school personnel and facilities to deal with racial problems is treated in light of the data assembled.

Credit: 4 semester-hours

INTEGRATION 421A and 421B. *Leadership of Activities and Services in Community Education*

This course is designed to prepare teachers and others to give leadership to community-education activities. Starting with the assumption that the school should serve as a community center, members of the course proceed to learn about the various activities and programs that can be initiated and carried on by the school. Consideration is given to programming, utilization of space and personnel, and care of equipment. Techniques for organizing and directing special programs such as scouting, folk dancing, crafts, field trips, production of films, forums and debates, etc., are included.

Credit: 4 semester-hours

INTEGRATION 422A and 422B. *The Organization, Administration, and Supervision of Programs in Community Education*

This is a workshop type of course which emphasizes the integration of school, social, recreational, and adult education programs. The course presents a survey of current trends in community education as adopted and implemented by boards of education throughout the country. Principles, policies, practices, and problems related to the administration and supervision of community-education programs are surveyed. The following types of programs are considered: summer playgrounds, day camps, after-school centers, evening centers, youth and adult recreation centers.

Credit: 4 semester-hours

INTEGRATION 430. *Techniques for Improving Reading Abilities*

This course deals with the diagnosis and remedial treatment of difficulties in reading. A study is made of the basic principles underlying desirable reading experiences and their application in guiding children to success in learning to read adequately.

Credit: 2 semester-hours

INTEGRATION 440. *Camping Education*

The purpose of this course is to familiarize the students with camping and outdoor education as educational methods utilized by the schools of America. The aims and methods of camping are studied, and consideration is given to the communities that have active camping and outdoor education programs in operation.

When given through the Part-Time Division of the College, a week-end experience at the New Jersey State School of Conservation in the Stokes State Forest is required for credit in this course.

Credit: 2 semester-hours

INTEGRATION 441. *Conservation Education*

This course is designed to give teachers and prospective teachers a background for organizing and teaching conservation on various grade levels. The need for conservation, the various kinds of natural resources, and some of the modern methods for using and renewing these resources are considered. Field trips, laboratory experiences, visual aids, printed materials, and visiting specialists combine to make this a useful introductory course for all teachers.

Credit: 2 semester-hours

INTEGRATION 442. *Practicum in Camp Leadership*

In this course the student has an opportunity to learn the techniques of camp leadership through practical experience, guided group study, and discussion. The practical experience comes through serving as a camp counselor in an actual camp situation.

Credit: 2 semester-hours

INTEGRATION 444. *Practicum in Conservation Education*

This course is designed to provide teachers and supervisors with a background of experience and knowledge which will enable them to organize and to conduct conservation education programs in their own communities. Using an extensive library of conservation educational material, students formulate teaching units, lists of teaching aids, and projects suitable for use in their own communities. Participation in conservation projects with the children in the demonstration camp furnishes a practical background for research and discussion.

Prerequisite: INTEGRATION 441, *Conservation Education*, or SCIENCE 412, *Field Studies in Science: Biological*, or SCIENCE 413, *Field Studies in Science: Physical*, or the equivalent

Credit: 2 semester-hours

INTEGRATION 450. *Psychological Foundations of Personality*

This course is concerned with the physical, mental, and cultural bases underlying the formation of the personality of the individual. Emphasis is placed upon the implications for the teacher in developing understanding of the formation and measurement of personality.

Credit: 2 semester-hours

INTEGRATION E460. *Public School Program of Studies*

This title is given to a group of courses designed for public school systems desiring help in curriculum reconstruction. Each of the parts of this general course will be on an inter-college basis, and taught by specialists in the field. Credits from the faculties of the cooperating State Teachers' Colleges of credit will be issued by the college.

- Part I. 460A—Principles of Curriculum
- Part II. 460B—Workshop in Curriculum
- Part III. 460C—Organization and Evaluation of Curriculum
- Part IV. 460D—The Social Studies Program
- Part V. 460E—The Language Arts Program
- Part VI. 460F—The Science Program
- Part VII. 460G—Workshop in Mathematics and Science Education
- Part VIII. 460H—The Mathematics Program

These cooperative inter-college courses are designed to meet requests from the public school authorities or from individuals in the community who are such as to require their help. Any individual may elect this course unless he is actively engaged in more than six semester-hours in these courses. Credits are awarded at the New Jersey State Teacher's College.

Credit for each part is 2 semester-hours.

INTEGRATION 461. *The Junior High School Program*

Recent trends in the development of the curriculum and the relation of the curriculum to the organization of the junior high school are studied. Curriculum patterns in representative schools are studied and evaluated. An opportunity is given to develop units of work for junior high schools of his choice.

C

INTEGRATION 480. *Field Science for Elementary Schools*

Working in a natural setting, rather than in a classroom, this course stresses firsthand experience with natural resources. It suggests what can be done to convey an understanding of the elementary-school student. In developing units of natural resources consideration is given to the

Part II. Testing and Evaluation in Instructional Program
This course is a part of a group of courses designed to meet requests from public school systems desiring help in curriculum reconstruction and in up-grading of teacher personnel. The course is given as a workshop dealing with testing, test construction, evaluation of students, and evaluation of test results on teacher-prepared tests. Practical classroom tests and actual teaching situations are considered.

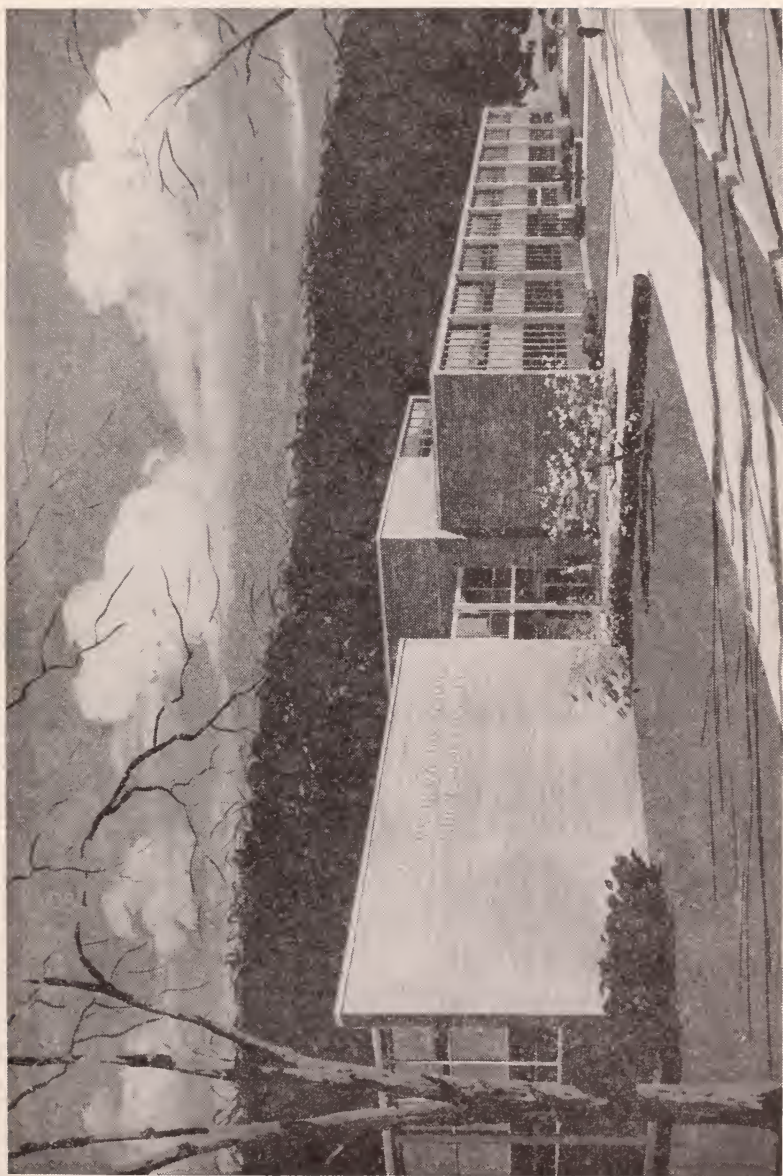
Credit: 2 semester-hours

minerals, plant and animal life, astronomy, weather, and all outdoor phenomena, both physical and biological. If desired, collections are made under supervision, and some latitude is provided for individual specialization in some phase of field science. The student needs no formal scientific background for this course. Methods of teaching on the elementary-school level as well as subject-matter content are included. Simple demonstrations, experiments, collections, acquisition of free and inexpensive materials, reference publications, and the most recent methods and trends in field-trip procedure are considered.

Credit: 2 semester-hours

ELEMENTARY EDUCATION COURSES

Although the New Jersey State Teachers College at Montclair is engaged primarily in preparing secondary school teachers, during the present shortage of teachers in the elementary schools it was deemed expedient to offer courses in the field of elementary education for the undergraduates of the college leading toward certification to teach in these subjects. Under certain conditions courses in elementary education may be used for graduate credit. Students should check with their advisers in this connection.



The New Look—Classroom, Laboratory, Studio Building Now Under Construction

DEPARTMENT OF MATHEMATICS

The graduate courses in mathematics are designed to meet the needs of teachers in service. They offer the opportunity for further study in pure mathematics, in the applications of mathematics to related fields, and for the study of current problems in the teaching and supervision of mathematics.

A candidate for the Master of Arts degree in mathematics should consult the Chairman of the Mathematics Department before matriculation, since the choice of graduate courses should be adjusted to the preparation acquired in undergraduate work. Of the thirty-two graduate credits required for the degree, eighteen or more (the exact number depends upon the candidate's previous preparation) must be taken in the Department of Mathematics.

A candidate who does not have a certificate to teach mathematics must have thirty undergraduate credits in college mathematics as a prerequisite for graduate work. In any case, a candidate who wishes to matriculate for the A.M. degree in mathematics must have had courses at least through the differential and integral calculus.

REQUIREMENTS IN MATHEMATICS DEPARTMENT

- I. At least 18 semester-hours of graduate courses in mathematics are required. These courses must bear catalog numbers equal to or greater than 500, unless permission is granted the candidate by the Chairman of the Mathematics Department to take courses with numbers less than 500 for graduate credit.

The graduate courses in mathematics are grouped into the following three divisions:

A. Pure Mathematics

These are courses in advanced mathematics which form an extension of the required work for a mathematics major. They include MATHEMATICS 503, 504, 511A, 511B, 512, 515, 516A, 516B, 517, 521, 523, 524, and 532.

B. Applied Mathematics

These courses emphasize the applications of mathematics to related fields of work. They give an extension and generalization of secondary mathematics together with certain phases of college mathematics which are employed in solving problems arising in the physical, biological, and social sciences. The principal aim is to supply background informa-

tion that may be used to enrich the teaching of mathematics. These courses are: MATHEMATICS 505, 509A, 509B, 509C, 510A, 510B, 510C, 528, 531, and 601.

C. Teaching and Supervision of Mathematics

The principal items considered are the current problems arising in the teaching and supervision of mathematics, the organization and construction of course syllabi, administrative problems, and the use of current mathematical literature. The chief purpose is to enable the teacher to select more suitable teaching material, to improve teaching techniques, and to use effectively various types of teaching aids. These courses are: MATHEMATICS 501A, 501B, 501C, 506, 507, 529, 530, and 540.

II. *Requirements in the Integration Department*

- A. INTEGRATION 503, *Methods and Instruments of Research*, for two semester-hours is required of all students.
- B. In addition, four semester-hours must be selected from these courses: INTEGRATION 408, 409, 500A, 500B, 500C, 504A, 505, 521A, 521B, 535, 536, 537, 538, 551, 553.

III. *Elective Courses*

A sufficient number of graduate courses having 500 or 600 numbers must be taken to make up a total of thirty-two semester-hours.

In lieu of four of the required thirty-two credits, the candidate may write a thesis giving the results of some study in the field of mathematics or its teaching. This study must be made after consultation with the Chairman of the Mathematics Department and under the sponsorship of a member of the mathematics faculty. Plans should be made to have such a study in its final form and approved by the Mathematics Department by April 1st of the year in which the degree is anticipated. The preparation of such a dissertation does not relieve the candidate of any of the required credits in mathematics.

Special permission must be obtained from the Chairman of the Department to receive credit for courses with numbers under 500.

IV. *Final Examination*

A final examination in mathematics is given all candidates prior to the conferment of the degree. This examination is general in nature and is designed to test the candidate's maturity of thought in mathematics and in the teaching of mathematics.

GRADUATE COURSES

MATHEMATICS 501A. *Administration and Supervision of Mathematics, Part I*

This course is concerned with the problems met in organizing and supervising the teaching of mathematics. The topics considered are the functions and qualifications of the supervisor* of mathematics, in-service training of teachers, demonstration lessons, professional attitude and preparation of teachers, department meetings, selection of texts, current problems, research, and the basis for determining objectives. Some attention is paid to efficient methods of securing mastery of skills, the development of power in problem solving, and the organization of testing programs.

Credit: 2 semester-hours

MATHEMATICS 501B. *Administration and Supervision of Mathematics, Part II*

Particular emphasis is placed on such current problems of the high school as the organization of a four-year course in general mathematics, revision of the present college preparatory course, proposals for revision of, or changed emphasis in, the course in plane geometry, as well as suggestions for including some analytic geometry and calculus in the senior high school. Reports of various commissions on secondary mathematics are considered.

Credit: 2 semester-hours

MATHEMATICS 501C. *The Teaching of Advanced Secondary School Mathematics*

This course presents the best modern practices in teaching advanced algebra, trigonometry, solid geometry, and analysis in the last two years of the senior high school. Topics include: introducing trigonometry, teaching applications of trigonometry, variations in the sequence of topics, recent trends in the curriculum, the aims of teaching solid geometry, the elimination of certain subject matter and proofs, the use of algebra and trigonometry in solid geometry, making algebra *thinking* rather than *manipulation*, applications of advanced algebra, and the use of the function concept in unifying the mathematical knowledge of the student. A study is made of outstanding experiments in teaching these subjects and methods of adapting the material to the abilities and interests of the students.

Credit: 2 semester-hours

MATHEMATICS 503. *Foundations of Algebra*

Careful consideration is given to the fundamental concepts and postulates which form the foundation of algebra. Upon this basis the development of our number system is traced through the application of algebraic operations. Algebraic analysis supplies the criteria for the possibility of geometric constructions. Also a brief survey is given of the general theory and use of rational integral functions.

Credit: 2 semester-hours

MATHEMATICS 504. *Modern Algebra*

The modern algebraic theories of groups, rings, and number fields are studied. Particular attention is given to polynomials over a field, matrices and determinants, and the properties of linear independence and linear dependence.

Credit: 2 semester-hours

MATHEMATICS 505. *Consumer Mathematics*

A survey is made of consumer problems which lend themselves to mathematical treatment. Attention is given to the placement and the techniques of teaching such material in the intermediate grades and in the junior high school. The principal topics included are: the cost of supporting a family, the cost of owning or renting a home, problems of insurance, annuities, social security, investments, the quality and cost of consumer goods, seasonal trends, business cycles, and indices of business activity.

Credit: 2 semester-hours

MATHEMATICS 506. *Current Research in Secondary Mathematics*

Trends in the teaching of secondary mathematics (grades 7-14) and current trends in general education which affect the teaching of secondary mathematics are carefully studied. The influence of these trends on the syllabi and textbooks in secondary mathematics during the last several decades is systematically traced. A critical perusal of the literature in this field is required to reach worth-while recommendations for the improvement of teaching secondary mathematics.

Credit: 2 semester-hours

MATHEMATICS 507. *The Teaching of General Mathematics*

Reports, recommendations, and mathematics programs for high school students who have other objectives than a college preparation, are studied. Topics included are: characteristics of non-academic

students, mathematics for intelligent citizenship, vocational mathematics, remedial arithmetic, laboratory mathematics, source materials, classroom teaching techniques, and integration with other subject-matter areas as in the core curriculum.

Credit: 2 semester-hours

MATHEMATICS 509A. *A Critical Interpretation of Mathematics in the Senior High School, Part I*

An opportunity is here offered for an investigation and interpretation of the algebra and geometry of the secondary school. The meaning and use of secondary mathematics are stressed, rather than the methods of teaching. Among the topics discussed are: algebra as a thought process and not a mechanical operation, types of thinking in algebra and geometry, fundamental laws of arithmetic, algebra as generalized arithmetic, geometrical interpretation of algebra, the function concept in algebra and geometry, the changing scope and subject-matter of Euclidean geometry, limits and incommensurables, and integration (i. e., correlation and fusion) of all secondary mathematics.

Credit: 2 semester-hours

MATHEMATICS 509B. *A Critical Interpretation of Mathematics in the Senior High School, Part II*

Among the topics discussed are: the development and use of the limit concept in secondary mathematics; the introduction of analytic geometry and calculus; the geometry of space; permutations and combinations; the elements of probability and statistics. The subject matter is adapted to the secondary level and treated from the professional viewpoint.

Credit: 2 semester-hours

MATHEMATICS 509C. *A Critical Interpretation of Mathematics in the Junior High School*

The aim of this course is to give teachers a deeper insight into the subject-matter usually taught in the seventh, eighth, and ninth grades. Among the topics considered are: the nature of graphs, an intuitive and experimental approach in geometry, the arithmetic and algebra for social use and interpretation, approximate measures and mensuration, and integration with other subject fields. The course is open to all junior and senior high school teachers and those elementary school teachers who have had two years of high school mathematics.

Credit: 2 semester-hours

MATHEMATICS 510A. *Applications of Mathematics: Social Studies*

Fundamental topics common to both mathematics and social studies are carefully examined including ways and means of integrating these topics in the secondary school curriculum. They include: measurement in social science, presentation of social data, use of index numbers, distribution of wealth and income, utilities, use of charts and graphs, theory of investment, probability, insurance, and annuities.

Credit: 2 semester-hours

MATHEMATICS 510B. *Applications of Mathematics: Science, Art, and Music*

This course surveys the mathematics of optics, electricity, meteorology, biology, chemistry, physics, music, and similar topics. Various physical and biological laws including the laws of growth, especially the applications of certain periodic functions, are studied. The chief purpose is to supply the teacher with background material that may be used to enrich the teaching of mathematics and to encourage further study of these allied fields.

Credit: 2 semester-hours

MATHEMATICS 510C. *Applications of Mathematics: Geography, Astronomy, and Navigation*

An opportunity is here offered for mathematics teachers to become acquainted with the mathematics of mapping, astronomy, and navigation closely related to the algebra, solid geometry, and trigonometry taught in high school. A study of spherical geometry and trigonometry leads to topics in mathematical astronomy and geography and to navigation. The discussion includes such topics as: latitude and longitude; time and the calendar; map projections; the making of star maps; sizes and distances of the sun, moon, planets, and stars; weighing the earth and moon; and relativity.

Credit: 2 semester-hours

MATHEMATICS 511A. *Foundations of Geometry*

A careful study is made of the fundamental postulates and basic principles underlying Euclidean synthetic and projective geometries. Past and present trends in this field and the resulting modifications are considered in connection with the historical background of each. Finally, the development of the subject is briefly traced through certain fundamental groups of associated theorems and their generalizations.

Credit: 2 semester-hours

MATHEMATICS 511B. *Non-Euclidean Geometry*

The development of Hyperbolic-Non-Euclidean and of Elliptic Non-Euclidean geometry is carefully traced. A brief survey of the historical development of each is given. This course is designed for teachers and students of mathematics who desire a better perspective of the field of geometry.

Credit: 2 semester-hours

MATHEMATICS 512. *Methods of Approximation*

This course deals with the determination of functions from observed experimental data. Among the topics considered are: finite differences, symbolic operators, differencing, interpolation formulae, the Gamma function, and the Euler-MacLaurin formula. The course is designed to show the nature of mathematics as an applied science.

Credit: 2 semester-hours

MATHEMATICS 515. *Differential Equations*

This course is a continuation of the calculus considered from a new view-point. Various applications of differential equations and their standard methods of solution are fully treated in this course. Among the topics included are: linear differential equations of the first degree and of the first and higher orders, linear equations of the n th order with constant coefficients, linear equations of the second order, exact and total differential equations, simultaneous equations, numerical approximation, and partial differential equations.

Credit: 2 semester-hours

MATHEMATICS 516A. *The Theory of Functions of Complex Variables*

The fundamental properties of complex numbers and the elementary properties of functions of complex variables are developed. These include the properties of mapping, line integrals, Cauchy-Goursat Theorem, and conformal mapping. The practical applications of the theory are stressed by the use of illustrative examples.

Credit: 2 semester-hours

MATHEMATICS 516B. *The Theory of Functions of Real Variables*

The fundamental properties of real numbers and the elementary properties of functions of real variables are systematically developed. Among the topics considered are: continuity, differentiability, integrability, algebraic and transcendental functions, hyperbolic functions, and infinite series.

Credit: 2 semester-hours

MATHEMATICS 517. *The Theory of Numbers*

This course offers a systematic treatment of certain fundamental properties of numbers. It includes such topics as: properties of integers; prime numbers; composite numbers; factorization; relatively prime numbers; properties of congruences and their solutions; fundamental theorems of Fermat, Euler, Wilson, Gauss, etc.; primitive roots of a congruence; quadratic residues; and certain types of Diophantine equations.

Credit: 2 semester-hours

MATHEMATICS 521. *Analytical Mechanics*

The fundamental basic principles of this course are Newton's laws of motion, whose applications and consequences are carefully considered in the study of such topics as: the composition and resolution of forces, the statics of a particle and of a rigid body, forces acting upon a body, friction, straight line motion, curvi-linear motion, work and energy, moment of inertia, etc. The need and usefulness of mathematics for the explanation of physical phenomena are clearly shown.

Credit: 2 semester-hours

MATHEMATICS 523. *The Theory of Probability*

In this course the applications of the theory of probability to life insurance, statistics, mechanics, and genetics are stressed. Special attention is paid to the implications of probability in secondary school mathematics, and to the teaching of probability in the senior high school. The ideas of choice in combinations and permutations are developed. The intuitive ideas and the classic paradoxes in the historical development of the theory are also considered. Additional topics considered are: continuous probability, the normal probability curve, and geometric probability. It is assumed that students taking this course have an understanding of college algebra and the elementary ideas of calculus.

Credit: 2 semester-hours

MATHEMATICS 524. *Statistical Inference and Sampling Theory*

In this course the student considers the planning and execution of a statistical study. Among the topics considered are: moments and moment generating functions; binomial, Poisson, and normal distributions; the general theory of sampling; student's distribution; chi-square distribution; analysis of variance and co-variance; statistical control; and the design of experiments. The development of statis-

tical reasoning is an important aim of the course. Applications are given to industrial, scientific, and social data.

Prerequisite: MATHEMATICS 408

Credit: 2 semester-hours

MATHEMATICS 528. *Mathematics Materials for Student Activities and Club Programs*

This course analyzes some of the large amount of material available for individual and club activities in mathematics. Mathematical recreation, plays, topics for essays or club programs, and popular books on mathematics are studied. The material considered varies from elementary arithmetical recreations for the elementary school to topics involving advanced mathematical ideas. Topics considered are: recreations; arithmetical, geometrical, and logical problems in arrangement, polyhedrons and crystallography, classical problems of antiquity, cryptography, magic squares, topological and unicursal problems.

Credit: 2 semester-hours

MATHEMATICS 529. *Curriculum Construction in Mathematics*

This course is conducted as a workshop or seminar in constructing curricula in mathematics. The chief objective of the course is cooperation with those communities which are planning changes in their courses of study. Among the topics considered are: the selection of aims, a study of recent courses of study in mathematics, the reports of various commissions, and other research pertinent to the questions at issue.

Credit: 2 semester-hours

MATHEMATICS 530. *Mathematical Materials and their Applications in the Teaching of Mathematics*

In this course the student considers the adaptation and use of multisensory materials to motivate and improve the teaching of high school mathematics. Particular attention is given: to the equipment needed for the modern mathematics laboratory and how it may be used effectively; to plans for the extra-curricular activities in mathematics, such as mathematics clubs and assembly programs; to such visual aids as pictures, lantern slides, motion pictures, and bulletin board exhibits; and to the books, periodicals, and pamphlets needed for the school and the teacher's library.

Credit: 2 semester-hours

MATHEMATICS 531. *Survey of Higher Mathematics*

The principal aim of this course is to give the student some insight into the nature and content of various fields of higher mathematics. This includes a discussion of the basic structure and framework of the following branches of higher mathematics: foundations of logic, higher algebra and algebraic theories, theory of groups, synthetic and analytic projective geometries, differential geometry, N-dimensional geometry, topology, vector analysis, and calculus of variations.

Credit: 2 semester-hours

MATHEMATICS 532. *Projective Geometry*

The methods of synthetic and analytic projective geometry are compared and used to emphasize the fundamental concepts of Euclidean geometry. Emphasis is placed upon the dependence of many common properties and theorems of Euclidean geometry upon the properties of lines, parallelism, perpendicularity, similarity of figures, and the definition of distance. Other topics considered include: the principle of duality, perspective and projective correspondences, the theorems of Desargues and Pascal, nets of rationality, homogeneous and nonhomogeneous coordinates, and conics.

Credit: 2 semester-hours

MATHEMATICS 540. *Research Seminar in Mathematics*

This seminar is designed primarily for those students who select some problem of interest in either the subject matter or the teaching of mathematics for intensive study and research. A written report is required of each student.

The course is open to all students who have had at least eight semester-hours of graduate work in mathematics. It is required of all students who wish to write a master's dissertation in this field.

Credit: 2 semester-hours

MATHEMATICS 601. *Workshop: Current Problems in the Mathematics Field*

This course is conducted as a workshop for the solution of such actual problems in the teaching of mathematics as: courses in mathematics for the general and for the specializing student; integration of mathematics with other courses; revision of subject-matter in particular fields, such as in plane geometry; and research problems in specific units of work. The class meets for conferences, reports, and lectures. Individual conferences between the instructor or consultant and each individual member of the class are held by appointment.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

MATHEMATICS 401. *The Teaching of Mathematics in Secondary Schools*

The techniques of teaching different units of work in the secondary school are studied, and the application of these techniques in a demonstration class is observed by the student. Eventually, the student participates in organizing and preparing teaching material; in conducting class activities; in constructing, administering, and evaluating tests; in tutoring; and in other teaching activities.

Credit: 3 semester-hours

MATHEMATICS 401X. *The Teaching of Mathematics in Secondary Schools*

Various methods and techniques of teaching different units of work in secondary school mathematics are studied. Out of his own experience and that of others, the student is required to formulate and discuss effective teaching procedures. Units of work are discussed as to content, organization, presentation, teaching techniques, and evaluation of achievement. Criteria for the selection and use of modern texts and auxiliary teaching materials are included.

Credit: 2 semester-hours

MATHEMATICS 402. *Applications of Mathematics*

The student is taught how to use and adjust those modern instruments of precision which can be used to motivate the teaching of mathematics in the junior and senior high school. Included among these are the slide rule, transit, sextant, planimeter, plane table, solar telescope, and astronomical telescope with equatorial mountings. Such early instruments as the astrolabe, hypsometer, baculum, and optical square are also considered.

Credit: 4 semester-hours

MATHEMATICS 404. *Readings and Lectures in Mathematics*

Lectures are given upon advanced topics in mathematics and on those phases of mathematics which are finding new applications, especially as they are related to the secondary field.

Credit: 2 semester-hours

MATHEMATICS 405. *History of Mathematics*

As a study of elementary mathematics emphasis is placed on the historical growth of arithmetic, algebra, and geometry. The development of fundamental concepts and operations involving the use of symbols is studied with emphasis placed upon noteworthy contributions and the influence of leading mathematicians. A by-product is the motivating effect of historical information on the teaching and learning of mathematics.

Credit: 2 semester-hours

MATHEMATICS 406. *Solid Analytic Geometry*

A review and extension of the theory of determinants, a study of lines and planes in space, of space coordinates, transformation of coordinates, loci in space, the sphere, and of quadric surfaces are considered in this course. The study of the general quadratic equation in three variables, invariance under motion, and the classification of numerical equations completes the course.

Credit: 2 semester-hours

MATHEMATICS 407. *Advanced Calculus*

After a brief review of the fundamental concepts of elementary calculus, more advanced topics are considered which include the theory of limits, continuity, the general theorem of mean value, infinite series, partial differentiation, and multiple integrals.

Credit: 2 semester-hours

MATHEMATICS 408. *An Introduction to Elementary Mathematical Statistics*

This first course covers the usual topics in statistics using calculus as a major tool in the derivation of formulæ.

Credit: 2 semester-hours

MATHEMATICS 410. *Mathematics of Finance*

This course introduces the student to the elementary theory of simple and compound interest and leads to the solution of practical problems in annuities, sinking funds, amortization, depreciation, stocks and bonds, installment buying, and building and loan associations.

Credit: 2 semester-hours

MATHEMATICS 412. *Modern Geometry*

This course presents a treatment of modern synthetic geometry on an advanced level. It is based on a fundamental framework of plane geometry and maturity of teaching in the field of mathematics. Topics treated are loci and geometric constructions; fundamental theorems of Ceva, Menelaus, Stewart, Euler, Ptolemy, etc.; homothetic figures, the harmonic range, noteworthy lines and points, systems of circles, and inversion.

This course is not open for credit to students who have received credit for Mathematics 301.

Credit: 4 semester-hours

DEPARTMENT OF SCIENCE

The teacher of secondary school science is faced constantly with the problem of maintaining his professional competence with respect to recent advances in the fields of science and science education.

The past two decades have brought forth an astonishing array of new discoveries in biology, chemistry, physics, and other branches of science. Entirely new scientific points of view have to be considered by a teacher who wishes to keep his classroom practices up to date with the most recent findings as reported in current newspapers, magazines, and books.

The unusual growth of enrollment in secondary schools has brought the science teacher numerous difficult problems of science education which require a more scholarly background than has been necessary in previous decades. It is clear that the demands to be made upon the science teacher in the near future will greatly exceed those of any previous decade. A thorough knowledge of science and secondary education is necessary to professional success and promotion.

Other factors operate to multiply the problems of high school science teachers. The rapid growth of work in science in elementary schools and the extraordinary growth of junior high school science preparation foreshadow a fundamental reorganization of the senior high school science program. This work is now well under way in many sections of the country. The courses offered here are designed to help the science teacher meet these changing needs.

Prior to matriculation in the Science Department for the Master of Arts degree the student should complete a subject matter background of thirty semester-hours of college science distributed in the areas of biology, chemistry, and physics. Deficiencies must be made up prior to the conferment of the A. M. degree. A minimum of eighteen semester-hours of graduate credit work in science is required. SCIENCE 401 will not be accepted toward meeting this eighteen semester-hour departmental requirement. The student's work program is prepared in cooperation with the science adviser. Any changes in the student's work program are made only with the written approval of the science adviser.

COURSE REQUIREMENTS FOR THE A. M. DEGREE IN SCIENCE

I. *Integration Requirements*

Each student must take INTEGRATION 503, *Methods and Instruments of Research*, and four additional semester-hours in Integration courses.

II. *Science Requirements*

A. The candidate must complete three four semester-hour courses from among the following:

Biology	402, 407, 408, 409, 509
Chemistry	405, 406, 407, 408, 411, 412, 508, 509, 510
Physics	402, 405, 406, 407, 408, 409, 411, 510, 512
Science	405, 410

12 semester-hours

B. The candidate may elect two to three semester-hours from among the following:

Biology 501, Chemistry 501, Science 401D

C. The candidate may elect up to six semester-hours from among the following:

Biology	412, 413, 414, 508
Chemistry	413
Physics	513
Science	411, 412, 413, 414, 415, 418

Minimum for B and C—6 semester-hours

D. The candidate must take SCIENCE 505, *Science Seminar for Junior and Senior High Schools*.

2 semester-hours

E. With the consent of his adviser, the candidate may elect from among Science courses, Integration courses, or other courses on the 400-500 level.

Maximum possible for E—6 semester-hours

BIOLOGY

GRADUATE COURSES

BIOLOGY 501. *The Teaching of Biology in Secondary Schools*

This is a seminar and research course designed to give opportunity for study of the best methods and practices being used in the teaching of secondary school biology. Major topics of discussion are: aims of secondary school biology, course content, functions of textbooks, testing, laboratory exercises and demonstrations, and the collection and use of suitable and available laboratory materials. A study is made of recent research studies in the field of biology teaching.

Prerequisite: 16 semester-hours of work in biology

Credit: 3 semester-hours

BIOLOGY 508. *Social Applications of Biology*

This field-study course offers to teachers of science an opportunity to gain first-hand knowledge of the uses made of biological principles in industry and in modern laboratories. Field trips are designed to cover such varied interests as public health and hospital routine laboratories, medical botanical research laboratories, and the inspection of model industries developing biological products.

Prerequisite: 12 semester-hours of work in biology

Credit: 4 semester-hours

BIOLOGY 509. *Field Studies of Flowering Plants*

The emphasis of this course is placed upon the methods of identification of higher plants and the ecological factors affecting the growth and development of these plants. Plants in their winter conditions are considered first. As the season progresses, the emphasis changes from the identification of woody to herbaceous forms. Plant communities of various types are observed, and the factors influencing their development are discussed. Field trips are taken to such typical habitats as the Pine Barrens, Troy Meadows, Raritan, and others.

Prerequisite: General botany

Credit: 4 semester-hours

BIOLOGY 402. *Mammalian Anatomy and Histology*

A study is made of the gross structure of a typical mammal and of the structural peculiarities of its various tissues. Both the anatomical studies and histological studies included in this course are pursued with functional significance strongly emphasized. This course prepares the student for the study of human physiology.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 407. *Comparative Embryology*

A study is made of the stages in development and factors influencing the development of different animal types, particularly the vertebrates. Students in this course follow carefully the development of the chick through the earlier stages.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 408. *Biological Technique*

This course is designed to furnish the prospective teacher of biology with the technical details necessary to enable him as a secondary school teacher to handle successfully biological materials and experiments and demonstrations in which these materials are employed.

Prerequisites: 8 semester-hours of work in zoology and 4 semester-hours of work in botany

Credit: 4 semester-hours

BIOLOGY 409. *Human Physiology*

A study is made of normal and abnormal physiology based on previous study of mammalian anatomy and histology. In addition to an analysis of the part played by organs and tissues in carrying out the essential functions of the body, special attention is given to problems of hygiene and sanitation.

Prerequisite: A course in vertebrate anatomy or BIOLOGY 402

Credit: 4 semester-hours

BIOLOGY 412. *Genetics*

This course considers the scientific basis of the gene concept and its support in experiment from Mendel's work to the present allegations of the Lysenko school. Documents of some of the milestones in the history of the science are studied, and the adherence to sci-

tific method is carefully noted. The wide uses of the science in plant and animal improvement and the discoveries related to man's heredity make an integral part of the study. The course helps the teacher of biology or social studies to discriminate between what is scientifically known and what is political philosophy in genetics. Laboratory exercises supplement lectures and discussion.

Prerequisite: A course in college biology

Credit: 2 semester-hours

BIOLOGY 413. *Economic Botany*

The consideration of the importance of plants and plant life to the world in general and to man in particular is the principal aim of this course. The economic importance of bacteria, fungi, and other lower plants is considered as well as that of the seed plants.

Prerequisite: One year of general botany

Credit: 2 semester-hours

BIOLOGY 414. *Field Ornithology*

New Jersey is one of the best areas in the East for the study of birds. On the Montclair campus alone, over 130 species have been observed. This course deals primarily with the identification and natural history of birds. A variety of habitats is visited so that one can become acquainted with the habits and requirements of this unusually well-adapted vertebrate type. Migration, methods of attracting and protecting birds, the value of birds, and other problems are also considered.

Prerequisite: A year of biology or the equivalent

Credit: 2 semester-hours

CHEMISTRY

GRADUATE COURSES

CHEMISTRY 501. *The Teaching of Chemistry in Secondary Schools*

This course satisfies the requirements in the teaching of chemistry for the limited secondary certificate. A study is made of the objectives, recent trends, methods of presentation, courses of study, lesson planning, instructional aids, and subject matter of high school chemistry.

Prerequisite: 16 semester-hours in chemistry

Credit: 3 semester-hours

CHEMISTRY 508. *Advanced Organic Chemistry—Biochemistry*

In this course a study is made of the composition of living organisms, their nutritional requirements, their mechanism for promoting and regulating chemical action, and their metabolism of foods. A laboratory study is made of the components of foods, enzyme action, isolation of proteins, etc., blood and urine analysis.

Prerequisites: CHEMISTRY 405 and 406, organic chemistry

Credit: 4 semester-hours

CHEMISTRY 509. *Advanced Inorganic Chemistry*

This course offers opportunity for intensive and systematic study of the elements in the light of the periodic classification. Selected theories and principles of inorganic chemistry and some of their applications are studied in detail. A study is made of types of compounds. Directed use of chemical literature is an important part of this course. Individual experimental work in the laboratory consists chiefly of preparation and purification of inorganic compounds and testing for impurities in the products.

Prerequisite: A course in quantitative analysis

Credit: 4 semester-hours

CHEMISTRY 510. *Food Inspection and Analysis*

A study is made of the composition of commercial food products, the laws governing purity and marketing of foods, methods of analysis of foods and cosmetics, and the judging of foods for quality. Trips are made to food laboratories and food processing plants.

Prerequisites: Organic chemistry and quantitative analysis

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

CHEMISTRY 405. *Organic Chemistry, Part I*

The course covers the chemistry of carbon compounds and gives increased facility and experience in manipulating complicated chemical apparatus. It treats of the role of chemistry in life processes, including the synthesis and adaptation of carbon compounds in industry, in medicine, and in daily living. The first semester's work covers the chemistry of simple chain compounds and includes fats and carbohydrates.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry

Credit: 4 semester-hours

CHEMISTRY 406. *Organic Chemistry, Part II*

The work of this course covers the chemistry of multiple functional chain compounds, the ring compounds, vitamins, hormones, and the application of these compounds in industry, in foods, and in medicine.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry

Credit: 4 semester-hours

CHEMISTRY 407. *Advanced Quantitative Analysis*

This course is adapted to the needs and preparation of students. The student, after consultation with the instructor, may select analyses from the following: general or special types of oxidation-reduction; gravimetric methods; colorimetric methods; use of organic reagents in analyses; electrometric titrations; conductimetric titration; spectrographic methods of analysis; electrodeposition of metals; and special methods of analysis.

Prerequisites: General college physics and one semester of quantitative analysis, or special permission of the instructor

Credit: 4 semester-hours

CHEMISTRY 408A. *Industrial Chemistry, Part I*

The purpose of this course is to enable science teachers to understand the type of chemical industries in the State of New Jersey and the nature of their problems. A survey is made by lectures, reports, and trips to plants of the chemical industries in the State. This section of the course stresses the importance and the characteristics of chemical industries, the various unit operations used by the industries to carry out chemical reactions, the controls used to insure quality, organization for research, and the type of workers employed.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 408B. *Industrial Chemistry, Part II*

This course is a study of the chemical industries of the metropolitan area utilizing the methods outlined in CHEMISTRY 408A. Also, a study is made of the economics of chemical industry, chemistry and industry in general, and the effects of chemical discoveries upon living conditions.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 411. *Physical Chemistry, Part I*

This course, the first half of a year's work in physical chemistry, deals with gases, liquids, crystals, physical properties and electrolytes, colloids, thermochemistry, and homogeneous and heterogeneous equilibria.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry, CHEMISTRY 202, analytical chemistry, and PHYSICS 101 and 102, general college physics

Credit: 4 semester-hours

CHEMISTRY 412. *Physical Chemistry, Part II*

This course deals with electrical conductance, electrolytic equilibrium, electromotive force, electrolysis, polarization, chemical kinetics, photo-chemical reactions, atomic structure, molecular structure, and radioactivity.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry, CHEMISTRY 202, analytical chemistry, and PHYSICS 101 and 102, general college physics

Credit: 4 semester-hours

CHEMISTRY 413. *Atomic Structure and Atomic Energy*

This is a lecture course designed to familiarize the student with a modern conception of the structure of matter and to acquaint him with some significant aspects of atomic energy. Some of the topics studied include the following: discoveries leading to knowledge of the structure of the atom; isotopes; nuclear fission; nuclear reactions; chemical versus atomic explosions; the chain-reacting pile; production of plutonium; detection and measurement of nuclear radiation and incendiary effects of atomic explosions; atomic energy for peace-time uses; radioactive isotopes in agricultural, biological, and chemical research; and availability of materials for atomic energy.

Prerequisites: General college chemistry and general college physics, or special permission of the instructor

Credit: 2 semester-hours

PHYSICS

GRADUATE COURSES

PHYSICS 510. *Advanced Problems in Photography*

This course is intended to meet the needs of the camera club teacher and the hobbyist. The course includes negative and positive alterations, toning, printing processes, studio portraits, color photography, and photomicrography. The student is expected to submit prints of exhibition quality for public showing.

Prerequisites: General college physics, general college chemistry, and a first course in photography

Credit: 4 semester-hours

PHYSICS 512. *Modern Physics*

This course is a survey of recent experimental research in physics and of the newer theories concerning nuclear physics and electricity. Such topics as atomic spectra, radioactivity, artificial transmutation of the elements, and cosmic rays are discussed.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 513. *Nuclear Radiation*

A study of the nature of radiations is made. Particular attention is given to radiation measurement technique. The course is concluded with a study of health physics as related to radiation dosages and their effects. Some attention is paid to disposal of radioactive wastes, radiation protection, and safety precautions.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

PHYSICS 402. *Advanced Electricity*

The most important aims and purposes of the course are as follows: (1) to provide a substantial background of training in the fundamental laws and principles governing the generation and use of electricity; (2) to develop skill in manipulating laboratory and demonstration apparatus; and (3) to learn the basic principles of alternating current circuits.

Prerequisites: PHYSICS 101 and 102 and CHEMISTRY 101 and 102

Credit: 4 semester-hours

PHYSICS 405. *Light and Optical Instruments*

Topics included for study in the classroom and laboratory are: the propagation of light; emission and absorption of radiant energy; reflection, refraction, polarization; spectrum analysis; photometric measurements; photoelectric cells; measurement of high temperatures; characteristics of illumination, modern illuminants; and industrial and domestic uses of light.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 406. *Astronomy*

This course is designed to acquaint the student with the celestial sphere, celestial motions, and the phenomena associated therewith; to make him aware of the principles of astronomy. It consists of a survey of the solar system, practical problems in locating and identifying celestial bodies, a consideration of light and matter, the basic laws of motion, the physical-chemical properties of the sun and stars, stellar scales and maps, the measurement of distance, the cosmology of the universe, the history of astronomical concepts, and the regularities, irregularities, and evolution of the solar system.

This study is aided by the use of selected films and slides, actual sky study and field trips, the use of the sextant, octant, transit, spectroscope, sky maps, planetaria, and by telescopic observations.

Prerequisites: General college physics and chemistry

Credit: 4 semester-hours

PHYSICS 407A. *Aviation, Part I*

This course deals with the historical development of aviation, air traffic rules, airworthiness regulations, pilot certification, types of aircrafts, aircraft structures, principles of aerodynamics, lift, drag, stability, motions of an airplane, piloting, motorless flight, and aircraft engines. Flight experience is made available as a part of this course.

Prerequisite: General college physics

Credit: 2 semester-hours

PHYSICS 407B. *Aviation, Part II*

This course continues the study of the topics considered in PHYSICS 407A and also develops an understanding of power performance, propellers, engine instruments, and flight instruments. Flight experience is made available as a part of this course.

Prerequisite: General college physics

Credit: 2 semester-hours

PHYSICS 408. *Advanced Aviation*

This course consists of the study of navigation; meteorology as applied to flight operations; radio communications; flight and navigational radio aids; instrument flights; jet, turbojet, and rocket flight; and recent advancements in aviation.

Prerequisite: PHYSICS 407

Credit: 4 semester-hours

PHYSICS 409. *Introduction to Radio Communication*

This course deals with direct and alternating current circuits; construction and operation of detectors; characteristics of audio and radio frequency amplifiers; vacuum tubes; and comparisons of amplitude modulated and frequency modulated transmission and reception.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 411. *Photography*

This course consists of laboratory work and field work supplemented by lectures and demonstrations. Emphasis is placed on physical principles in the construction of cameras, projection printers,

tanks, and filters. Special attention is given to chemical principles in the development of films and paper, toning, intensification, and reduction.

Prerequisites: General physics and general chemistry or permission of the instructor

Credit: 4 semester-hours

SCIENCE

GRADUATE COURSES

SCIENCE 505. *Science Seminar for Junior and Senior High Schools*

This course is designed to afford opportunity for graduate students in science, supervisors, and science teachers: (1) to investigate research in science education; (2) to organize science experiences and science information with teaching materials for the public schools. Each member of the group selects a project. This project must be presented to the science faculty and graduate students for evaluation.

Prerequisite: Certification to teach science or matriculation for the A. M. degree in science

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

SCIENCE 401D. *The Teaching of Aviation in Secondary Schools*

This course covers the study of State aviation programs, texts, bulletins, free material for school use, demonstration equipment, tests, working models, visual aids, and references needed to teach aerodynamics, aircraft engines, meteorology, navigation, and aircraft communication in high schools. Field trips to airports and aviation industries are included.

Credit: 2 semester-hours

SCIENCE 404. *Problems in the Teaching of Science*

When a student has completed the assignment in student-teaching in a public high school in the State of New Jersey and has accumulated some experience with the problems of high school science instruction, he returns to the college campus for an intensive study of a limited number of problems in a single field of science.

Prerequisites: See the undergraduate bulletin for required courses in biology, chemistry, and physics

Credit: 2 semester-hours

SCIENCE 405. *Field and Laboratory Studies in Science*

This integrated course is designed to show the relationship in the geological rock formations, the types of soil, water patterns, plant communities, and animal inhabitants in northern New Jersey, and the effects on human occupations. The field trips are for the purpose of gathering data and materials for intensive work in the laboratory. The experiments are designed to give the student acquaintance with the science of common but possibly unstudied features of the landscape; e. g., soils are reproduced in profile and examined microscopically, physically, and chemically; water from a variety of sources is tested for biological and chemical impurities; the census of plant and animal inhabitants of typical areas is associated with relevant factors in the environment. Discussions precede and follow the field and laboratory work to establish the probable history of the area and to suggest the probable trend, whether advancing or retrogressing, of its development. Stress is placed on the kinds of human control in specific communities which would best serve their progress.

Students are asked to submit an analysis of the geological and biological features of some known community, based on the skills and principles learned. Some other objectives of the course include an understanding of the organization of school museums for learning purposes, the making of ecological maps and illustrating them with photographs and diagrams, and the techniques of ecological field trips. Two instructors, a chemist and a biologist, collaborate in giving this course.

Prerequisite: Proficiency in biology and chemistry

Credit: 4 semester-hours

SCIENCE 410. *Junior High School Science Demonstrations*

This course covers the methods of experimental instruction in grades seven, eight, and nine. A detailed study is made of about three hundred demonstrations.

Prerequisites: General college chemistry, college physics, and a course in general biology

Credit: 4 semester-hours

SCIENCE 411. *Problems in Field Studies in Science*

In this course each student selects a phase of field science in which he does advanced research under the guidance of the instructor. Plant ecology, bird-life, pond life, fungi, tree diseases, and insect life are a few of the areas from which the student may choose.

Prerequisites: SCIENCE 405, Field and Laboratory Studies in Science, or its equivalent plus at least 12 points in biology

Credit: 2 semester-hours

SCIENCE 412. *Field Studies in Science: Biological*

Extensive instruction in the identification and natural history of fauna and flora is given in this course. Students examine the ecology of plant and animal communities (terrestrial and aquatic) and relate such communities with man's use of natural resources. The relation of field activities to present school curricula is considered. No previous science courses are required.

Credit: 2 semester-hours

SCIENCE 413. *Field Studies in Science: Physical*

Emphasis in this course is given to local and New Jersey geology, minerals, soils, and waters, with emphasis on the chemical and physical aspects of soil and water. Field trips are taken through the Kittatinny Mountains and to the Delaware Water Gap.

Credit: 2 semester-hours

SCIENCE 414. *Conservation of Plants and Animals*

The social, economic, and ecological implications of plant and animal conservation are considered together in this course. Discussion periods are interspersed with field trips to forests and wildlife management areas. Co-operating experts from State and Federal agencies bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 415. *Conservation of Soil and Water*

The social, economic, and ecological implications of soil and water conservation are considered together in this course. Discussion periods are interspersed with field trips to selected areas. Outside experts bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 418. *Three Centuries of Science Progress*

This course includes a study of fundamental world changes that have resulted in the past three hundred years from scientific discoveries. Topics considered are the following: a background of the beliefs and practices of the age; the processes of thought which produced skepticism; the experiments devised to disprove ruling opinions; the new concepts arising from fresh evidence; and the social, economic, and philosophic adjustments following the discoveries. Stress is given to the nature of scientific inquiry, its cumulative nature, its desire for freedom, and how to judge the probable fruitfulness of a research problem. The role which the man of science occupies in the world today is contrasted with his counterpart in earlier centuries. Class demonstrations of historical experiments, readings in the original literature, and lectures and discussions are employed by the three or more science teachers of the course.

Credit: 2 semester-hours

SCIENCE 419. *Field Science and Conservation*

In this course students study phases of field science which are related to conservation. The components of soil and water which produce good crops are studied. Students gain an understanding of farm practices by visiting several nearby farms. Forest and wood-lot management, wildlife preservation, mineral resources use, and other important areas in which science influences the conservation of natural resources are investigated.

Credit: 2 semester-hours

SCIENCE 420. *Water Supply and Conservation Problems*

This course is designed to provide students an opportunity to do an extensive study of the water supply problems in New Jersey and surrounding states. A study of water tables, rainfall, irrigation, drainage, flooding, water shed management, stream pollution, and soil erosion, give students a background for understanding the problems involved in domestic and industrial use of water. State and regional water conservation projects such as Incodel, Passaic Valley Flood Control, and Stoney Brook Watershed are studied. Teaching materials are supplied, and methods of presenting this material to elementary and secondary pupils are demonstrated and discussed.

Credit: 3 semester-hours

DEPARTMENT OF SOCIAL STUDIES

The teacher of social studies works in a field the boundaries of which are constantly changing and expanding. The necessity for constant study, especially with regard to the contemporary social situation and its problems, presses upon every secondary school teacher of the social studies. The Social Studies Department at Montclair intends to provide for such teachers courses of an advanced character which will help to keep them abreast of the changes in a changing world. It also will provide advanced courses for those teachers who wish to increase their preparedness in specialized secondary school subjects. Finally, it aims to provide for the teacher-in-service an opportunity for keeping informed concerning the changing techniques and problems of teaching the social studies. Selections from advanced courses of the sort just described lead to the Master's degree in the social studies.

In order to qualify for the Master's degree in social studies, candidates will either prepare a thesis or pass an oral examination based upon a selected field of research.

REQUIREMENTS IN THE SOCIAL STUDIES DEPARTMENT

In general, a candidate must offer thirty-two hours of graduate credit, at least eighteen of which must be in the field of Social Studies, six in the field of Integration, and six or eight (depending upon the number of social studies credits required) elective credits in fields closely related to the social studies. The following are the more specific requirements:

- I. All candidates must take a seminar course, either SOCIAL STUDIES 502 or SOCIAL STUDIES 518. A candidate *may* offer both these seminars since the subject-matter content, aside from the instructions in research, is different in both courses.
- II. The remaining social studies courses should represent a diversified choice from among the following fields:

Ancient and Medieval History

Social Studies 421, 422, 423, 426, 427, 473

Modern European History

Social Studies 414, 420, 441, 448, 457, 458, 493, 506

United States History

Social Studies 408, 413, 419, 438, 447, 471, 474, 475, 480

The Americas

Social Studies 415, 417, 435A, 435B, 440A, 440B, 453A, 453B

International Affairs

Social Studies 412, 434, 442, 451

Economics

Social Studies 446, 450A, 450B, 456, 517, 522, 523, 524

Sociology

Social Studies 429, 439, 443, 444, 455, 476, 477, 479, 494

Political Science

Social Studies 402A, 402B, 407, 430, 433, 437, 515

Philosophy

Social Studies 404, 470, 478

Educational Techniques

Social Studies 401, 472

Credits may also be chosen to the amount of six from the offerings in Field Studies, China Institute, Workshop in Citizenship Education, and United Nations Institute.

- III. All candidates must take the course, *INTEGRATION 503—Methods and Instruments of Research*, and four elective credits chosen preferably from the following:

Integration 500B, 504A, 505, 550, 440

- IV. Elective credits in fields other than the social studies should be chosen from among the following:

Integration 408, 410

English 402, 404, 432, 442A, 442B, 533, 536, 537

Business Education 409, 412, 407A, 407B

Geography 406, 408A, 408B, 409, 410, 411, 412, 413, 414A, 414B, 416, 418, 419, 420, 503, 504, 509.

V. *Master's Thesis or Research Paper*

All candidates are required to complete either a Master's thesis or a Master's essay on a question or problem which has been chosen by the candidate for his specialization. The candidate is given an oral examination on the paper before a seminar of members of the Social Studies Department. Complete directions for this requirement may be obtained from the head of the department.

In the case of candidates offering undergraduate majors from institutions other than Montclair, it may be necessary to make more specific requirements with respect to choices among social studies and elective credits than is indicated above in order to fill gaps which may exist in the undergraduate major.

GRADUATE COURSES

SOCIAL STUDIES 502. *The Origin and Development of the American Constitution*

This course is an intensive study of the origin and framing of the Constitution of the United States. It aims to search out the roots and influences that determined our basic political institutions. The seminar method is employed and attention is given to the techniques of historical research and historical writing.

Credit: 2 semester-hours

SOCIAL STUDIES 506. *The British Empire from 1783*

This course deals with the evolution of the British Empire from the period of the old Colonial system to the present British Commonwealth of Nations. The rise of dominion government, the forces of anti-imperialism, and the various solutions suggested from the improvement of imperial relations are stressed.

Credit: 2 semester-hours

SOCIAL STUDIES 515. *History of Political Thought*

The major theories of representative political philosophers concerning the nature, functions, organization and sovereignty of the state are studied in this course. Among those discussed are: Plato, Aristotle, Cicero, Thomas Aquinas, Machiavelli, Luther, Calvin, Bodin, Hobbes, Locke, Spinoza, Montesquieu, Rousseau, Hume, Bentham, J. S. Mill, Burke, Hegel, Marx.

Credit: 2 semester-hours

SOCIAL STUDIES 517. *Money and Banking*

An opportunity is provided for an analysis of the monetary and banking principles and practices basic to modern economic organization. Consideration is given to the various theories of money, the relation of money to prices, banking systems and their operation, and the nature and significance of credit. Special attention is directed to an examination of the functioning of the Federal Reserve System in relation to the gold standard, a managed currency, stability, inflation and deflation.

Credit: 2 semester-hours

SOCIAL STUDIES 518. *Recent Trends in American History (1918 to the Present)*

Without attempting to reach final conclusions, this course analyzes the major problems which have influenced American life since the First World War. The new position of the nation in world affairs, the modifications of the old economic order, the progress of social and political change are all surveyed. This course, like Social Studies 502, is conducted by the seminar method and may be taken instead of that course. As the subject matter is different, except for the instruction in methods of research, both courses may be taken.

Credit: 2 semester-hours

SOCIAL STUDIES 522. *The Development of Economic Institutions and Ideas*

This course deals with the changing principles, institutions and ideas which determine the character of economic society. The doctrines of the more important schools of economic thought such as the Classical, Historical, and Institutional groups are emphasized, and the teachings of the Mercantilists, Physiocrats, Adam Smith, Malthus, Ricardo, Marx, Henry George, Veblen, Hobson, Commons, Keynes, and others are examined in relation to the important problems of money, credit, prices, business cycles, foreign and domestic commerce, property, wages, the nature of wealth and value, and economic planning.

Credit: 2 semester-hours

SOCIAL STUDIES 523. *The Economics of the Business Cycle*

The purpose of this course is to consider the nature of business cycles and their impact on the national economy, to survey business cycle theories, and to analyze the significant proposed methods of control for the purpose of developing a desirable public program conducive to economic stability.

Credit: 2 semester-hours

SOCIAL STUDIES 524. *The Economics of Public Fiscal Policy*

This is a course for the mature student interested in the effect of government tax policies on the national economy. Consideration is given to the various theories of justice in taxation: the incidence and shifting of the tax burden; the constitutional aspects of government finance; fiscal policy and full employment; taxation and economic inequality; the economics of public borrowing; and management of the national debt. Particular emphasis is placed on the conflicting

issues which have arisen from the increasing encroachment of public finance on both business and the consumer due to war and recurrent depressions. Attention is also given to such special programs as the Marshall Plan and aid to underdeveloped economic areas.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions see the undergraduate catalog.

ANCIENT AND MEDIEVAL HISTORY

SOCIAL STUDIES 421. *Oriental Civilization*

This course presents the important contributions to civilization and social progress made in antiquity in three great centers of the Near East: Egypt, Mesopotamia, and Crete.

Credit: 2 semester-hours

SOCIAL STUDIES 422. *Greek Civilization*

The aim of this course is to present the development of Greek civilization from the earliest period to the beginning of the Christian era.

Credit: 2 semester-hours

SOCIAL STUDIES 423. *Roman Civilization*

This course traces the social changes in Rome from the earliest times to the end of the Western Roman Empire. The rise and fall of the empire are discussed with relation to their importance in medieval civilization.

Credit: 2 semester-hours

SOCIAL STUDIES 425. *Medieval Civilization*

This course covers the period from the decline of Rome to about 1500. It first emphasizes the blending of barbarian cultures with that of the Roman resulting in feudalism as a way of life. After that a study is made of the gradual evolution of towns, a trade and industrial economy on a broadening scale, the emergence of monarchical states, an intellectual awakening with the founding of universities, all of which leads finally to our modern system of national states.

Credit: 3 semester-hours

SOCIAL STUDIES 426. *Medieval History to 1498*

In the first part a study is made of the factors contributing to the political breakdown of the imperial principle, such as the growth of Christianity, barbarization of the West, and the expansion of Islam. The second part is devoted to the developments in Western Europe after 1200, stressing political movements, medieval commerce, guilds, growth of towns, and cultural changes.

Credit: 4 semester-hours

SOCIAL STUDIES 427. *Ancient History to 378 A. D.*

The first part of this course covers the Oriental period and the Greek through the Periclean Age. The second part covers the Hellenistic period from the rise of Philip of Macedon, stressing attempts at federalism.

Credit: 4 semester-hours

SOCIAL STUDIES 473. *The Arts in Western Civilization*

This course is designed to show how the social, economic, political, and religious movements in Western Civilization influenced the aesthetic expression of Europe from the Golden Age of Greece to the Rise of the Industrial Revolution. Greek, Roman, Byzantine, Gothic Baroque, and Rococo art, architecture, and music are discussed and illustrated.

Credit: 2 semester-hours

MODERN EUROPEAN HISTORY

SOCIAL STUDIES 414. *Modern England*

This course deals both with the historical periods as such and with the influences of the political, economic, and social forces in the English literature of the century. The Napoleonic era, political reform, factory reform, the humanitarian movement, the Irish question, the ministries of Gladstone and Disraeli, and the interpretation of politics and literature are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 420. *European Outlook*

This course is designed to provide the background for understanding Europe today. The reality of ideological struggles between free and totalitarian countries is emphasized as a main source of present-day conflict.

Credit: 4 semester-hours

SOCIAL STUDIES 441. *Economic History of Europe*

The study of Europe from an economic point of view is particularly important in the light of present European problems and their relation to world-wide conditions. This course is a survey of the economic life and development of Europe from the emergence of the ancient civilizations to the beginning of the modern economic world.

Credit: 2 semester-hours

SOCIAL STUDIES 448. *The British Dominions*

This course deals with the role Canada, Australia, New Zealand, and South Africa are playing in present world affairs. Special emphasis is given to Canada and its dual position as an American state and a part of the British Empire.

Credit: 2 semester-hours

SOCIAL STUDIES 457. *Development of Russia*

Factors which have shaped the evolution of the Russian people, such as Byzantinism and the Greek Orthodox faith, the Synod, Tartar state organization, the Mir, Westernization from Peter to Lenin, Slavophilism, and dialectic materialism, are emphasized.

Credit: 2 semester-hours

SOCIAL STUDIES 458. *Russia as a World Power*

An analysis of Russia's relations with China, Iran, Turkey, the European continent, England and the United States is presented. Marxist world policy, as interpreted by Kautsky, Plekhanov, Jaures, Bukharin, Trotsky, Lenin, and Stalin, is described.

Credit: 2 semester-hours

SOCIAL STUDIES 493. *Western Europe Since World War I*

This course presents an outline of the rise of communism and fascism and the reaction of the western democracies to these movements. The Civil War in Spain, the Munich Pact, the failure of the League of Nations, diplomatic events of the World War II era, United Nations problems, the North Atlantic Pact, and special problems of western defense are emphasized. An evaluation of western Europe's significance for the United States is attempted.

Credit: 4 semester-hours

UNITED STATES HISTORY

SOCIAL STUDIES 408. *A History of New Jersey*

This course is designed to assist teachers in acquiring a better knowledge of their state. A study is made of the history of New Jersey from the point of view of the social, political, economic, and cultural development of the people from the beginning of settlement to the present. Special attention is given to the geographical and industrial aspects of the state, and the place of New Jersey in the national setting.

Credit: 2 semester-hours

SOCIAL STUDIES 413. *Economic History of the United States*

The great trends and movements in agriculture, finance, commerce, manufacturing, transportation, and industrial relations are traced from their beginnings in the colonial period to their contemporary expressions in the present crisis.

Credit: 2 semester-hours

SOCIAL STUDIES 419. *American Political Biography*

This is the study of the life and influence of the leading figures in American political and social history. It is the aim here to show the relation of each of these characters to the times in which he lived and to point out how he influenced the trend of American life. The study includes such leaders as Washington, Jefferson, Hamilton, Webster, Lincoln, Cleveland, T. Roosevelt, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 438. *The Literature of American History*

A brief description of the material available for the study of American history is followed by class practice in finding and using the primary sources of some of the facts commonly taught in schools.

Credit: 2 semester-hours

SOCIAL STUDIES 447. *Diplomatic History of the United States*

The purpose of this course is to show how we have become gradually conscious of our world interests and responsibilities, and the important role we have come to play in international politics.

Credit: 2 semester-hours

SOCIAL STUDIES 471. *The United States Since World War I*

This course surveys the major problems, economic, social, political, and international, which have marked our national development since the end of the first World War. It is intended especially for social studies seniors as a preparation for the second year of secondary school American history as provided for in the recently adopted state requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 474. *America in Transition*

This course surveys rapidly the results of the Civil War and then emphasizes the major trends, economic and social, which have made modern America. It is intended as a more advanced study than that which is made in the undergraduate course. The period covered is from 1867 to around 1914.

Credit: 2 semester-hours

SOCIAL STUDIES 475. *The History of American Thought*

This course considers the influential thinking in America from the Mayflower Compact to the Marshall Plan to see how certain ideas or trends of thought have grown out of situations and have in turn helped to mould the course of our history. The student should gain an appreciation for the American contribution to world culture, and an examination is made of outworn stereotypes which exist today. The writings and discourses of important American thinkers are considered including Mather, Paine, Jefferson, Emerson, Thoreau, and Veblen.

Credit: 2 semester-hours

SOCIAL STUDIES 480. *Social History of the United States*

This course presents a study of the social and cultural aspects of American history. As such, it supplements but does not take the place of economic and political history. The course considers population movements and growth, rural and urban social problems, status of women, family life, utopian ventures, mass media of communication, amusements and recreation, and human rights.

Credit: 2 semester-hours

THE AMERICAS

SOCIAL STUDIES 415. *Latin-American Relations of the United States*

This course aims to provide the information necessary to a clear understanding and accurate appreciation of the political, economic, and social relations that have developed between us and our Latin-American neighbors.

Credit: 2 semester-hours

SOCIAL STUDIES 417. *American Archaeology*

This course shows that the New World of the early discoverers was in reality far from new. The course discusses the prehistoric pueblo dwellers and early mound builders. The truly remarkable civilizations of the Mayas and the Incas are examined and compared with that of the Aztecs. North American tribes of Indians are also studied in order to evaluate their significant cultures.

Credit: 2 semester-hours

*SOCIAL STUDIES 435A. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part I*

This course deals specifically with the relations of the United States and the Caribbean countries. Attention is given to the dependencies of the United States in this region as well as to the independent republics. Twentieth century political, economic, and cultural developments of this region are stressed in light of the inter-American system.

Credit: 2 semester-hours

*SOCIAL STUDIES 435B. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part II*

This course deals specifically with the twentieth century political, economic, and cultural life of the South American nations. The role which the South American states play in world affairs is stressed. Attention is given to post-World War II developments and adjustments in South America.

Credit: 2 semester-hours

*SOCIAL STUDIES 440A and 440B. *The Development of Central and South America as Colonies and Nations*

The first part of this course surveys the period of exploration and settlement in the colonies of South and Central America. The second

* Note: Courses 435A, 435B, 440A, and 440B are independent courses; none is prerequisite for another.

part studies the experiences of the various Latin-American nations under different forms of government.

Credit: 2 semester-hours each

SOCIAL STUDIES 453A. *The Development of Mexico and the Caribbean States*

It is intended to show in this course the historical development of Mexico and the Caribbean nations in terms of their political, cultural, social, and economic progress in order to develop understandings and appreciations for their cultures and present-day problems. The relationships of their problems to those of the other American nations are stressed and placed in proper perspective.

Credit: 2 semester-hours

SOCIAL STUDIES 453B. *The Development of Canada*

This course is devoted to the study of the historical background, geographical environment, governmental organization, economic behavior, and social conditions of the northern neighbor of the United States. Its professional objective is to provide the understanding and appreciation necessary to the student and teacher who may follow and interpret the growth, internal and external, of the Dominion of Canada and of its relation to the United States as well as to the British Commonwealth of Nations.

Credit: 2 semester-hours

INTERNATIONAL AFFAIRS

SOCIAL STUDIES 412. *International Government*

The attempts of the international community of states to express itself in a formal world organization are the subject of this course. The agencies which have been established to deal with international legislative, executive, administrative, and judicial problems are studied.

Credit: 3 semester-hours

SOCIAL STUDIES 434. *Contemporary World Affairs*

This course is devoted to a survey of the leading diplomatic, economic, political, and military issues before the world today. The backgrounds from which these international affairs have evolved are reviewed.

Credit: 2 semester-hours

SOCIAL STUDIES 442. *The Far East*

A study is made of the economic, social and cultural situation of the Far East, with particular emphasis on the historical background of China and Japan, and on our relations with the Philippines.

Credit: 2 semester-hours

SOCIAL STUDIES 451. *The Middle East*

This course is a survey of Indian and Moslem civilizations. Post-war planning for the region from the Near East through Persia, India, Burma, Thailand, and Malaya to the Netherland East Indies is discussed.

Credit: 2 semester-hours

ECONOMICS

SOCIAL STUDIES 446. *Current Problems in Economics and Government*

This course is designed to analyze the relationship of economics to government. The causes and results of governmental activities are discussed in the light of their economic significance and their bearing on public welfare.

Credit: 2 semester-hours

SOCIAL STUDIES 450A and 450B. *Modern Economic Problems and Policies*

The purpose of this course is to contribute to the general need for increased knowledge in the area of economic relationship, using the problem approach method of analysis. 450A begins with a brief recapitulation of the overall functioning of the economic system, after which the class proceeds to a detailed study of our broader economic problems and the public policies relating to them. Specifically, the problems are those relating to population and natural resources, the economic functions of government, the measurement of economic activity, monetary stability, basic banking problems, business cycles, marketing trends, economic inequality, and social security. 450B considers those problems associated with the world economy, international trade and exchange, monopoly and its regulations, the problems concerned with the control of public utilities, emergency price regulation and economic stabilization, labor problems, the problems of public finance, the public debt and fiscal policy, and, finally, the nature of comparative economic systems and their relations with each other.

Credit: 4 semester-hours

SOCIAL STUDIES 456. *International Economic Relations*

The purpose of this course is to study the significance of international trade and exchange to the economic life of our nation and to the world economy.

Credit: 2 semester-hours

SOCIAL STUDIES 482. *Conservation and Rural Economic Life*

This course provides for a study of one of the basic economic problems in America today. Land use, farm loans, price support of farm products, increased acreage production, conservation practices, are among the topics studied to give the student a better understanding of the relationship between rural and urban living. Trips are arranged to nearby farms, dairy cooperatives, farm bureaus, banks, and town meetings.

Credit: 2 semester-hours

SOCIOLOGY

SOCIAL STUDIES 429. *Present-Day Social Problems*

Beginning with a survey of levels of living in the United States and their relation to the distribution of wealth and income, this course proceeds with a study of poverty and crime, their sources, treatment, and prevention.

Credit: 2 semester-hours

SOCIAL STUDIES 439. *The Family and Its Problems*

This course gives a history of the family, our American family patterns, the effects of social change, marital patterns of interaction, social roles, sources of conflicts and frustration, divorce and desertion, special problems in family life, economics of children and the home, social legislation pertaining to family problems, marital adjustments, personality change after marriage, parent-child relationships, and personality reorientation.

Credit: 2 semester-hours

SOCIAL STUDIES 443. *Youth and the Community*

This course is a sociological study of youth in its many relations to the community. Special attention is given to problems which arise in the relationship of youth and the community; e. g., juvenile delinquency, conditions contributing to maladjustment, poorly adjusted children, and educational and social agencies active in solving youth behavior.

Credit: 2 semester-hours

SOCIAL STUDIES 444. *The Social Bases of Human Relations*

This course emphasizes the social bases of human nature and personality. Primary and secondary groups, folkways, mores, and institutions are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 455. *Social Legislation*

This course analyzes the social, economic, and political adjustments which have come about in our society due to technological progress.

Credit: 2 semester-hours

SOCIAL STUDIES 476. *Personality Development and Group Relations*

A study is made of personality growth through social contacts, the environmental factors found in the home and family, neighborhood, play, and school groups. Methods of measuring the place of the individual in the group, analysis of the group process, ways of bringing about better life adjustment, and integrating experiences are the subject matter of the course. Concrete cases of maladjustment to society and disintegrated personality are studied. Agencies in the community which serve youth are visited, and leadership in community group activities is recognized as part of the course requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 477. *Rural Sociology*

During this course the student comes face to face with rural life in northern New Jersey. Social processes and problems are considered. Opportunities are provided for students to attend Grange meetings, county fairs, rural dances and parties, and to live for a day or two with a farm family.

Credit: 2 semester-hours

SOCIAL STUDIES 479. *Education and Intercultural Relationships*

Within our nation as within the world, along with common needs and interests, there exist differences between groups and individuals which act as barriers to satisfying human relationships. This course is devoted to a consideration of these barriers and of common interests and needs which exist in spite of such barriers. We study not only the existence of such conditions but also the attitudes, principles, and techniques which may make for better human relationships.

Credit: 2 semester-hours

SOCIAL STUDIES 483. *Modern Approaches to Social Problems*

This course is designed to acquaint students with techniques and practices developed in recent years for a scientific approach to problems of human relationship. Techniques to be studied include: sampling techniques for testing large groups, questionnaires, interviewing techniques, objective observation of culture patterns, objective observation in controlled laboratory situations, sociometrics, role-playing techniques, attitude testing, and use of semantic analysis in test construction. Students become acquainted with these techniques through the study of a variety of recent reports. The selection of items to be studied depends on the needs and interests of class members. This course is designed to aid in the development of attitudes and practices which make possible the use of a modern, scientific approach to social problems.

Prerequisite: An introductory course in sociology or special permission of the instructor.

Credit: 2 semester-hours

SOCIAL STUDIES 494. *Social Studies and Conservation*

Everyday problems of living as they are related to and affected by the wise use of our natural resources are studied in this course. The student learns about the renewable resources, soil, water, forests, and wildlife, as well as the non-renewable resources, minerals, oil, and coal. Economic, social, community, national, and individual problems are approached by giving the student first-hand experiences gained through extensive field trips in northern New Jersey. This course is of particular interest to social studies and elementary school teachers but also forms an excellent experience background for all educational fields. Methods of teaching, courses of study, and teaching units are developed.

Credit: 2 semester-hours

POLITICAL SCIENCE

SOCIAL STUDIES 402A and 402B. *American and Comparative Government*

The basic facts and principles necessary for the teaching of civics, history, and the political aspects of Problems of American Democracy are studied. The first part is devoted to American national government, including the obligations and rights of citizens, the suffrage, political parties, the changing nature of the Federal system, and the executive, administrative, legislative, and judicial systems. The second part deals with similar political phenomena in England, France, Germany, Italy, and Russia.

Credit: 2 semester-hours each

SOCIAL STUDIES 407. *New Jersey State and Local Government*

A study is made of the State Constitution; New Jersey's place in the Federal system; the rights and duties of citizens; suffrage; political parties; the legislative, the executive, and administrative systems; the courts, the law enforcement and correctional systems; revenues and expenditures; public health, educational, highway, and other services; county and municipal government; and other local political units.

Credit: 2 semester-hours

SOCIAL STUDIES 430. *The Citizen and the State*

This course is designed to help any citizen become better acquainted with the many organizations by and through which our complex society manages itself. The emphasis is placed on government and political organizations, but the course also includes a study of the many other organizations of the community, the county, and the state that have to do with directing policy and maintaining controls. The aim of the course is to encourage intelligent appreciation and participation rather than simply to accumulate academic information. Consideration is also given to the ways in which such working knowledge can become a part of the experience of the pupils in our schools.

Credit: 2 semester-hours

SOCIAL STUDIES 433. *American Political Thought*

This course deals with contemporary trends and theories as they have emerged from social and economic conditions and as they are founded upon the bases laid down by such men as Hamilton, Madison, Washington, Jefferson, Marshall, Calhoun, Webster, Lincoln, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 437. *The Political Party System in the United States*

Among the topics discussed are: party organizations, the political boss, the political machine, party finances, the process of voting, election laws, primaries, conventions, platforms, presidential elections, majority rule, the development of the party system, sectional politics, the farm vote, the labor vote, and the future of party government in the United States.

Credit: 2 semester-hours

PHILOSOPHY

SOCIAL STUDIES 404. *The Philosophy of History*

It is the purpose of this course to investigate the relation of history to the other social studies and also the major attempts to find the meaning of history. A brief survey is made of the leading philosophies of history.

Credit: 2 semester-hours

SOCIAL STUDIES 470. *History and Principles of Philosophy*

This course presents a study of the history of philosophy and of the important principles contributed by outstanding philosophers from Thales to Gentile. Much of the discussion is centered on the three types of philosophic thought: naturalism, idealism, and pragmatism. Among the philosophers considered are: Plato, Aristotle, Bacon, Spencer, Rousseau, Hegel, James, Dewey, and Gentile.

Credit: 2 semester-hours

SOCIAL STUDIES 478. *Theories of Social Justice from Antiquity to Our Time*

This course is designed to show how specific ideas of social justice resulted from specific historical conditions and events. A comparison of social upheavals among the ancient Hebrews, Greeks, and Romans; the early Christians; the peasants in the Middle Ages; the religious rebels of the early Renaissance; and the revolutionaries of the modern age is to furnish background material for an understanding of present social thought. Lectures and discussions cover the social prophets of the Hebrews; Lycurgus; Cleomenes; Plato; Gracchus; Spartacus; the Essenes, the Waldensians, the Albigensians, and the Hussites; Wycliffe; John Ball; and on selected social thinkers of the last few centuries, such as Hobbes, Locke, Hume, Rousseau, the Utopians, the Socialists, and the Anarchists.

Credit: 2 semester-hours

EDUCATIONAL TECHNIQUES

SOCIAL STUDIES 401. *The Teaching of the Social Studies in Secondary Schools*

This course aims to present recent tendencies in educational method in teaching the social studies. A program is presented containing the correlation of subject-matter organization in socialized recitation, the teaching of current events, projects in citizenship, and the use of the project-problem as a method of teaching history and civics.

Credit: 3 semester-hours

SOCIAL STUDIES 472. *Modern Social Studies Instruction and Supervision*

This course is designed primarily to assist teachers and supervisors to obtain a comprehensive view of recent curriculum trends, current subject-matter tendencies, and newer practices in secondary school social studies. Topics discussed include: materials, methods, and techniques; use of audio-visual aids; courses of study and experimental problems; professional literature; and problems of the critic teacher and the supervisor.

Credit: 2 semester-hours

FIELD STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 460. *Central Eastern Region*

This fifteen-day tour of Pennsylvania, Maryland, Virginia, West Virginia, North Carolina, and Tennessee covers the major points of historic interest associated with the Colonial Period, the American Revolution, and the Civil War, and the geographic features of the coastal plain, the Piedmont, the Great Valley, and the Appalachian Mountains in these states. Travel is by modern chartered motor coach, and overnight stops are made at first-class hotels. Among the places visited are: Valley Forge, Philadelphia, Baltimore, Annapolis, Washington, Arlington, Alexandria, Mt. Vernon, Fredericksburg, Richmond, Washington's birthplace at Wakefield, Lee's plantation at Stratford, Yorktown, Williamsburg, Jamestown, Raleigh, Chattanooga, Asheville, Great Smoky Mountains, Norris Dam, Jefferson's Monticello at Charlottesville, Natural Bridge, Sky-line Drive in the Shenandoah National Park, Luray Caverns, Winchester, Harper's Ferry, Frederick, Gettysburg, and the Pennsylvania Dutch area around Lancaster and Ephrata.

Credit: 3 semester-hours

SOCIAL STUDIES 461. *New England and French Canada*

This field study course gives an opportunity to study by direct observation the historical and geographical features of New England and the Province of Quebec. The trip, occupying the twelve days immediately following the summer session, is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers the lower Connecticut Valley, including Hartford, Springfield, Northampton, and Deerfield; the Rhode Island cities of Providence and Newport; historic Massachusetts towns such as Plymouth, Boston, Lexington, Concord, Salem, and Marblehead; the coast of New Hampshire and southern Maine; the White Mountains in the Mt. Washington and Franconia Notch area; the Canadian Province of Quebec, including the ancient French city of Quebec, Montmorency Falls, St. Anne de Beaupré, Montreal; the western shores of Lake Champlain, Lake George, and the Hudson River. It is an indispensable background for an understanding of Colonial and Revolutionary life and history in this region.

Credit: 3 semester-hours

SOCIAL STUDIES 462. *Continental United States*

This field study course consists of sixty-two days of directed travel, including all of July and August, and provides an opportunity for gaining an integrated view of our country as a whole. The trip is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers about 12,500 miles and visits 26 states and 6 National Parks. Among the major points of interest are Gettysburg, Natural Bridge, Blue Ridge and blue grass region, Mammoth Cave, Lincoln shrines in Kentucky and Illinois, Dodge City, Royal Gorge, Pikes Peak, Denver, Rocky Mountain National Park, Taos and other Indian Reservations, Santa Fe, Petrified Forest, Painted Desert, Grand Canyon, Bryce and Zion National Parks, Hoover Dam, Los Angeles, Hollywood, San Diego, San Juan Capistrano and other Missions, Tia Juana, Santa Barbara, Sequoia and Yosemite National Parks, Monterey, San Francisco, Sacramento, Lake Tahoe, Reno, Donner Pass, mammoth redwood groves, Crater Lake, Columbia River Valley, Portland, Seattle, Mt. Rainier, Grand Coulee Dam, Spokane, Butte, Yellowstone National Park, Salt Lake City, pioneer trails of Wyoming, Black Hills, Chicago, Detroit, Toronto and Niagara Falls. All important geographic and historical features are studied under the instruction of members of the college faculty and local specialists. Write for detailed descriptive folder.

Credit: 10 semester-hours

SOCIAL STUDIES 463. *The Lower South*

This is a fifteen-day field study course, covering the gulf coasts of Louisiana, Mississippi, and Alabama, and both coasts of Florida. Among the topics to be observed and studied are the Acadian and Creole culture in and around New Orleans; the industrial, historical, and recreational features of Biloxi, Mobile, and Tallahassee; the tobacco, citrus, and sponge-fishing industries in the neighborhood of Tampa, St. Petersburg, Lake Wales, Sarasota, and Fort Myers; the plant and animal life of the Everglades along the Tamiami Trail; the millionaire playgrounds of Miami and Palm Beach; and the historical shrines of America's oldest city, St. Augustine. It is usually offered during the Christmas holidays.

Credit can be given for only one of the following courses: SOCIAL STUDIES 463, 464, and 484.

Credit: 3 semester-hours

SOCIAL STUDIES 464. *Southeastern Region and Gulf Coast*

This is a twelve-day field study course covering the Atlantic Coast from Baltimore to Savannah and the Gulf Coast from Tallahassee to New Orleans. It surveys the economic, geographic, and historical aspects of the coastal plain, the piedmont, and the lower Mississippi Valley visiting, among other places, Richmond, Williamsburg, Charleston, Savannah, Tallahassee, Pensacola, Mobile, Biloxi, New Orleans, Baton Rouge, Natchez, Vicksburg, Jackson, Birmingham, Atlanta, Greenville, Charlotte, and Greensboro. It is offered during the Christmas holidays.

Credit can be given for only one of the following courses: SOCIAL STUDIES 463, 464, and 484.

Credit: 3 semester-hours

SOCIAL STUDIES 465. *The Border States*

This is a nine-day field study course covering mainly the states which were border or frontier states during the early stages of the westward movement or border states between the North and the South during the Civil War. The route of the trip will be down the eastern shore of Delaware and Maryland to Williamsburg, up the southern shore of the James River to Appomattox and across the mountains to Natural Bridge; then down the Great Valley to Knoxville and the Norris Dam, westward to Nashville, north again to Mammoth Cave, the Lincoln Memorial, and the Blue Grass Country of Kentucky, up the Ohio River through the land of iron and steel to Pittsburgh, and finally homeward across the Appalachians by way of the Pennsylvania Turnpike.

Credit: 2 semester-hours

SOCIAL STUDIES 466. *Puerto Rico and the Virgin Islands*

This is a nine-day field study course devoted to a survey of our nearest island possessions. It includes a rather thorough exploration of San Juan and its vicinity, including the University, the rain forest and the submarine gardens, a three-day trip through the island visiting pineapple, coffee, sugar, textile, and rum producing areas, churches, homes, and historic places. One day is spent in St. Thomas, largest of the Virgin Islands. The trip to and from the islands is made by air. It is offered during the Christmas holidays.

Credit: 2 semester-hours

SOCIAL STUDIES 467. *Florida*

This is a field-study course covering the Florida peninsula including both coasts, the Everglades, and the Lake Region. Among the places visited are ancient St. Augustine; the winter playgrounds at Palm Beach and Miami; the Tamiami Trail through the Everglades; the west coast cities of Sarasota, St. Petersburg, and Tampa; and the Lake Region in the neighborhood of Lake Wales and Orlando. The trip affords opportunity for topographical, historical, and industrial studies. It is usually given during the Easter vacation.

Credit: 2 semester-hours

SOCIAL STUDIES 469. *Mexico*

This field-study course aims to give a comprehensive view of contemporary Mexican life with its geographic, economic, historic, and cultural setting. Transportation to and from Mexico City is by air and in Mexico by private cars. Overnight stops and meals are at the best hotels. Places visited include Xochimilco, Acolman, Teotihuacan, Fortin, Puebla, Oaxaca, Guadalajara, Queretero, Guanajuato, Patzcuavo, San Miguel de Allende, San Jose Purua, Morelia, Toluca, Taxco, and Cuernavaca. The itinerary is carefully planned to include all points of major interest and significance. Special studies may be made in the fields of geography, history, art, architecture, archaeology, sociology, economics, and other fields.

Credit: 3 semester-hours

SOCIAL STUDIES 481. *The West Indies*

This course consists of ten days of directed travel in five countries in the Caribbean region. Transportation is by air and private cars with overnight stops at the best hotels. Opportunities are given for study of geographic, historic, economic, and cultural phenomena in Puerto Rico (one day), Santo Domingo (two days), Haiti (two

days), Jamaica (two days), Cuba (two days), visiting San Juan, Cuidad Trujillo, San Cristobal, Port au Prince, Kenscoff, Kingston, Havana, and rural areas in all countries.

Credit: 2 semester-hours

SOCIAL STUDIES 484. *Gulf Coast and Lower Mississippi Valley*

This is a nine-day field-study course covering the Gulf Coast from Mobile to New Orleans. It also surveys the economic, geographic, and historical aspects of the lower Mississippi Valley visiting among other places Mobile, Biloxi, New Orleans, Baton Rouge, Natchez, Vicksburg and Jackson.

Credit can be given for only one of the following courses: Soc. St. 463, 464, and 484.

Credit: 2 semester-hours

BACKGROUND STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 492A and B. *Studies in American Life—The East and the West*

These courses comprise a unit designed to give the student an integrated understanding of the United States as a cultural, historic, geographic, social and political unit and, at the same time, an appreciation of the regional differences which characterize American unity in diversity. It should be useful to those who have traveled, to those who intend to travel, and to those who, although they cannot travel, wish to broaden their knowledge of our country. The geography, the history, the literature, the art, the music, the architecture, the people, the manners and customs, the flora and fauna, the economic, social, and political problems, and the significant personalities of the regions studied are discussed and illustrated with slides, films, and other audio-visual materials. Either course may be taken without the other.

The subject matter of SOCIAL STUDIES 492A covers New England, the Central East, the South, and the Middle West east of the Mississippi River. The subject matter of SOCIAL STUDIES 492B deals with the regions west of the Mississippi, i. e., the Great Plains, the Mountain States, the Southwest, the Northwest, and California.

Credit: 2 semester-hours each

INSTITUTES AND WORKSHOPS

SOCIAL STUDIES 490A. *United Nations Institute*

This course covers four and one-half hours per day for ten consecutive days excluding Sunday. It consists of basic lectures on factual backgrounds by the instructor, supplementary lectures by visiting lecturers from the United Nations and other organizations, discussions, workshop and library projects, demonstrations of the use of audio-visual materials, and field trips to the United Nations. Included among the subjects studied are the national state system, war and peace, world organizations (past, present, and proposed), the national armaments problem, international law, the international police proposal, pacific methods of settling international disputes, and the outlook for international co-operation.

Credit: 3 semester-hours

SOCIAL STUDIES 490B. *The United Nations and American Foreign Policy*

The purpose of this course is to help provide an understanding of the United Nations in its operation as a basis for American foreign policy. In that the Charter of the United Nations forms the backbone of American cultural, economic, and military cooperation with other nations, its interpretation and the application of our aid to needy people open a wide area of disagreement within the nation. Following the principle that American foreign policy should rest upon an intelligent understanding on the part of the electorate and working within the framework of the policy of the State Board of Education with regard to controversial issues, the United Nations Institute deals with the strong as well as the weak aspects of this newly created world organization. This institute serves the needs of teachers of all grades, students of foreign policy, the public at large, as well as visitors from other lands who are here to study the ways of American democracy. It is available to students who have completed the requirements for SOCIAL STUDIES 490A, *United Nations Institute*, or the equivalent.

Credit: 3 semester-hours

SOCIAL STUDIES 490C. *The Specialized Agencies of the United Nations*

The purpose of this course is to give the student an opportunity to learn about the various activities of the specialized agencies of the United Nations. The course deals with the positive activities of the

United Nations in the various areas of human welfare. Visiting lecturers from the agencies themselves and from areas of the world receiving such help are a regular part of the class work. Trips to the New York offices of these agencies and individual research make up the balance of the work for this course.

SOCIAL STUDIES 490A, *United Nations Institute*, or its equivalent is a prerequisite for this course

Credit: 3 semester-hours

SOCIAL STUDIES 490D. *The United States and World Affairs*

The purpose of this course is to give the student an opportunity to make a thorough survey of the leading problems in world affairs. Visiting lecturers from agencies concerned with the problems of today's world supplement the basic information supplied by the regular members of the Institute staff. Included among the subjects studied are: Underdeveloped areas of the world, technical assistance, international trade and cultural interdependence. Special emphasis is placed on the relations of the United States with such areas of the world as the Far East, Eastern Europe, the Middle East, Western Europe, and Latin America.

This course is designed primarily for teachers who feel the need for accurate background information and improved teaching materials and techniques for use in their classrooms. In addition to the conventional lectures, this course features the showing of the latest films in the field of world affairs, field trips to the United Nations and to foreign areas of New York, exhibits of teaching materials, demonstrations of teaching techniques and materials, folk singing, and folk dances suitable for classroom use.

Credit: 3 semester-hours

SOCIAL STUDIES 490E. *Latin America, A Survey*

The purpose of this course is to give the student an opportunity to make a thorough survey of Latin America. Visiting lecturers from agencies concerned with Latin American affairs supplement the basic information supplied by the regular members of the Institute staff. Included among the subjects studied are: Geographic setting and influences, pre-European cultures, exploration and settlement, independence, the Monroe Doctrine, economic colonialism, Pan-Americanism, present-day Latin America, United States relations with Latin America, and Latin America and the United Nations.

This course is designed primarily for teachers who feel the need for accurate background information and improved teaching materials and techniques for use in their classrooms. In addition to conventional lectures, this Institute features the showing of the latest films

on Latin America, field trips to the United Nations and Latin American centers of New York, exhibits of materials suitable for teaching, demonstrations of teaching techniques and materials, folk singing, and folk dances suitable for classroom use.

Credit: 3 semester-hours

SOCIAL STUDIES 491A. *Workshop in Citizenship Education, Part I*

The purpose of this workshop is to present a study of what has been done in some of the many projects in citizenship education throughout the country. Special emphasis is placed on the plans and materials developed by the Citizenship Education Project now being conducted by Teachers College, Columbia University, and financed by the Carnegie Corporation. Montclair has been one of the eight teachers colleges cooperating in this project, and the College High School is now a cooperating school. Consultants are invited in as needed. Attention is given to programs and practices already in use in the schools, and advantage is taken of the state-wide project of this past year in collecting from the schools experiences in education for character and citizenship. New means for citizenship education are sought, and methods of evaluation are reviewed. Experience in the group processes essential to democratic action is provided. It is hoped especially to include in the workshop those who have been or may be serving as training teachers for Montclair student teachers, especially in the fields of social studies and English. Principals and administrators who want to join with others in learning how to make more effective the citizenship education in the schools with which they are connected are invited to participate. Each participant in the workshop works on actual plans for carrying out such education in the school and the classroom.

Credit: 2 semester-hours

SOCIAL STUDIES 491B. *Workshop in Citizenship Education, Part II*

Membership in this workshop course is limited to those who have completed SOCIAL STUDIES 491A, and participants in this advanced workshop meet and work with the members of the SOCIAL STUDIES 491A workshop. On the basis of previous experience, each member of the SOCIAL STUDIES 491B group is expected to work out several laboratory practices or similar projects for use in the classroom or the school.

Credit: 2 semester-hours

SOCIAL STUDIES 499. *Introduction to Chinese Culture*

A number of authorities introduce first-year students to the rise, growth, and maturing of Chinese civilization, as well as to the fundamental problems of China today, including the conflict of ideologies. The course is given in twelve days. Each day there are two hours of lectures in the morning; after lunch a period of forty-five minutes is devoted to informal talks including further discussion on Chinese music, philosophy, Chinese school days, festivals, and calligraphy. Some time is also given to the singing of Chinese songs and the showing of motion pictures. During the two-hour workshop period the students prepare their projects, teaching units, and background material under the direction of faculty members.

Credit: 3 semester-hours

SOCIAL STUDIES 496A. *The Chinese Society*

This course is an intensive study of the formation of the Chinese people, their collective life, and the interaction of natural and human forces with the resultant social organizations from early times to the present. Particular emphasis is placed upon the development of social institutions, including the family, labor guilds, educational systems, and religious institutions, as well as their transformation and modernization under the impact of different forces from the West. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*

Credit: 3 semester-hours

SOCIAL STUDIES 496B. *China: The Evolution of a Nation*

This course is an intensive study of the Chinese civilization, the forces underlying the development of the national character of the Chinese people, their contacts and conflicts with other peoples and cultures from historical times to the present. Because of its voluminous material, this course does not attempt to cover the whole span of Chinese history, but it is an integrated presentation of the maturing of the Chinese people as a nation. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*

Credit: 3 semester-hours

SOCIAL STUDIES 497. *Chinese Philosophy*

This course shows how the ancient philosophies, Confucianism, Taoism, Buddhism, Mohism, can be applied to the China of today and how they affect modern Chinese thought. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*, or an equivalent course in philosophy

Credit: 3 semester-hours

SOCIAL STUDIES 498. *China and the Far East*

This course presents to the student a factual and up-to-date analysis of the forces that are operating in the Far East and shows how these forces may affect future developments in the critical area of the world. China, with its people as a key area in the Far East, is interpreted in terms of current economic, political and cultural developments. Recognized experts from the various countries in the Far East present problems from the standpoint of their experience and background. The course itself is synthesized by a course director who is a serious student of China and its neighbors.

Credit: 3 semester-hours

FINE ARTS 414. *History of Chinese Art*

For a description of this course, see page 113.

Credit: 3 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

For a description of this course, see page 34.

Credit: 3 semester-hours

OTHER COURSES THAT MAY BE USED AS ELECTIVES

For more complete descriptions see the undergraduate catalog.

FINE ARTS 406. *Art Workshop*

The workshop offers choice of experience in painting, drawing, sculpture, ceramics, and print-making for students who wish to employ the creative visual arts in the teaching of other subjects. The course is designed to allow the student to have concentrated experience in art media best suited to his needs. Emphasis is placed on individual satisfaction through creative self-expression. No previous art experience is required.

Credit: 2 semester-hours

FINE ARTS 408. *Creative Painting*

This course gives the student an opportunity to use the materials of the painter for personal creative experience. Through the use of oils, water colors, and other media, the student is encouraged to work on landscape, figure, and free imaginative composition. Emphasis is placed on individuality of expression, variety of subject matter, and experimentation. No previous art experience is necessary.

Credit: 2 semester-hours

FINE ARTS 414. *History of Chinese Art*

In this course the developments and distinguishing characteristics of the major arts of China are traced by specialists and are surveyed from the point of view of their historical development. An historical survey of the development of Chinese art from the dawn of civilization to the present day is made which includes the role played by foreign influences such as the spreading of Buddhism and the Chinese influence on other parts of the world. There are twenty-four hours of lectures in the morning and round-table discussion and library work in the afternoon. During the afternoon workshop period the technique of Chinese painting is demonstrated. Although there is no prerequisite for this course, it is suggested that those who enroll should have some knowledge of art or have taken SOCIAL STUDIES 499—*Introduction to Chinese Culture*.

Credit: 3 semester-hours

FINE ARTS 415. *School Arts and Crafts with Native Materials*

In this course the student gains an appreciation and understanding of art expression growing out of the immediate environment as he learns to work creatively with native materials. Useful and decorative articles are made from wood, fruit pits, seeds, grasses, reeds, and native clay. The use of natural dyes for coloring is demonstrated. The construction of teaching aids using simple, native materials is also shown. Flower and plant arrangements for room and table decoration in keeping with good conservation practices are presented.

Credit: 2 semester-hours

GEOGRAPHY 503. *Economic Geography of the United States and Canada*

A study is made of the agricultural, industrial, and commercial development of the United States and of the geographic factors that have contributed to that development.

Credit: 2 semester-hours

GEOGRAPHY 504. *Economic Geography of Europe*

This course constitutes a study of the economic development of the nations of Europe in relation to the environmental background and resources that have made Europe one of the world's leading continents.

Credit: 2 semester-hours

GEOGRAPHY 509. *Economic Geography of Asia*

This course constitutes a treatment of the economic and commercial development of the countries of Asia in relation to their natural environment.

Credit: 2 semester-hours

GEOGRAPHY 406. *Geology*

This course deals with the earth and its geographic, stratigraphic, and structural development throughout geologic time; the record of the evolution of life as interpreted through a study of rocks and fossils.

Credit: 2 semester-hours

GEOGRAPHY 408A and 408B. *Political Geography*

This course deals with the geographic conditions influencing the significant changes in the political divisions of the world. Emphasis is placed on geographic factors influencing racial, religious, commercial, and political adjustments between nations.

Credit: 2 semester-hours each

GEOGRAPHY 409. *Economic Geography of the British Isles*

A comprehensive treatment of the resources of the British Isles is given, and the influence of the natural environment upon the utilization of those resources in the economic, social, and political development of the British Empire is evaluated.

Credit: 2 semester-hours

GEOGRAPHY 410. *Economic Geography of Caribbean America*

This is a study and interpretation of the major and important minor economic areas of Caribbean America in relation to the natural environment.

Credit: 2 semester-hours

GEOGRAPHY 411. *Geographic Influences in American History*

A study is made of the geographic factors influencing the development of social, economic, and political life in America.

Credit: 2 semester-hours

GEOGRAPHY 412. *Geography of Africa, Australia, and New Zealand*

A study is made of the activities of the people of Africa, Australia, and New Zealand in relation to their natural environment. Attention is given to the influence of geographic factors upon the post-war adjustments and the possible future relations of these countries with the United States.

Credit: 2 semester-hours

GEOGRAPHY 413. *Economic Geography of South America*

This course constitutes a study of the influence of the natural environment upon production and utilization of resources in the economic, social, and political development of the various nations of South America.

Credit: 2 semester-hours

GEOGRAPHY 414A and 414B. *Advanced Economic Geography*

This course is a study of the influence of the physical environment upon the production of, the trade in, and the utilization of the important agricultural, forest, mineral and sea products, and the manufactured commodities of the world.

Credit: 2 semester-hours each

GEOGRAPHY 416. *Conservation of Natural Resources*

This course includes a study of the natural resources of the United States, their past and present exploitation, their influence on the development of the nation, their conservation and future use.

Credit: 2 semester-hours

GEOGRAPHY 418. *Regional Geography of North America*

This course constitutes a detailed regional treatment of the continent of North America. Emphasis is placed upon the human activities of the various regions in relation to their natural environment and the relations of the regions to each other.

Credit: 2 semester-hours

GEOGRAPHY 419. *Economic Geography of the Union of Soviet Socialist Republics*

This course is designed to give a comprehensive and objective treatment of Soviet Russia's natural resources and industrial potential in relation to the geographic environment. Special emphasis is given to the formative periods of Russia's industry to show the significance of and the continuous operation of geographical factors in the economic development of Russia.

Credit: 2 semester-hours

GEOGRAPHY 420. *Field Geography and Conservation*

This course constitutes a study of the relation between relief features of northern New Jersey, the location of natural resources, and the way in which land use and population distribution follow these patterns. Emphasis is given to the reading and interpretation of topographical maps and aerial photographs and to a study of the United States Geological and Soil Surveys of this region. By means of an actual land-use survey the student comes to appreciate the problems of conservation as they grow out of man's use of natural resources.

Credit: 2 semester-hours

MUSIC 401. *The Teaching of Music in Secondary Schools*

This course deals with the aims, content, and procedure in the teaching of music in the junior and senior high schools.

It includes a study of general and elective music courses, extra-curricular music activities, and music for special programs. Attention is given to the coordination of the choral and instrumental pro-

gram with music appreciation and music theory. Lesson plans and units of work are prepared for use in the classroom.

This course includes observation and participation in the College High School.

Credit: 3 semester-hours

MUSIC 405. *Orchestra Conducting and Score Reading*

This course aims to develop skills in orchestra conducting and score reading. It includes a study of the particular type of ear training needed in conducting, the technique of the baton, score reading, and interpretation. A special feature of this course is the presentation of a large amount of musical examples taken from standard repertory which contain practically all technical and psychological problems which face the conductor. Practical experience in conducting is given in the College High School Orchestra and the College Orchestra.

Prerequisite: MUSIC 305

Credit: 2 semester-hours

MUSIC 406. *Epochs in Musical Development, Part III*

This course is a continuation of MUSIC 208 and makes a study of the late romantic period and the rise of modern music. It includes a study of the music of Richard Strauss, Bruckner, Prokofieff, Mahler, Debussy, Tschaikowsky, Mussorgsky, Stravinsky, Schoenberg, Bartok, and Hindemith.

This course is professionalized for use in the teaching of music appreciation in the classroom.

Credit: 2 semester-hours

MUSIC 407. *The Development of the Opera*

This course deals with the origin, development, and characteristics of opera in the Italian, French, German, and Russian schools. Class analyses are made of representative operas of these schools. The content of this course is related to the Saturday afternoon broadcasts from the Metropolitan Opera, New York City. Special attention is given to building an ear repertory of operatic music heard over the radio.

Credit: 2 semester-hours

MUSIC 408. *Wagner Music Dramas*

This course deals with the operas and music dramas of Richard Wagner. It includes a study of Wagner's artistic ideals and their application to his compositions.

Credit: 2 semester-hours

MUSIC 409. *Counterpoint*

This course aims to provide a practical treatment of counterpoint for music students. It includes analysis of the works of the sixteenth century masters of vocal polyphony with enough of original work to insure a grasp of the principles involved.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 410. *Composition*

This course aims to develop the creative power of the student in the composition of small vocal and instrumental forms. Special attention is given to the functional aspects of composition in word setting, writing accompaniments, and improvisation.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 413. *Masters of the Symphony*

This course aims to provide the student with an understanding and appreciation of the classic and romantic symphony through the study of the symphonies of Haydn, Mozart, Beethoven, Schubert, Schumann, and Brahms.

Credit: 2 semester-hours

MUSIC 414. *Modern Symphonic Forms*

This includes a study of the post-romantic symphonies of Bruckner, Mahler, Dvorak, Franck, Tchaikowsky, and Sibelius; the symphonic poems of Strauss, Smetana, and Debussy, and the orchestral suites of Rimsky-Korsakoff, Ravel, and Stravinsky.

Credit: 2 semester-hours

MUSIC 416. *Music in Modern Society*

This course aims to interpret the nature, function, and forms of music in modern society in terms of the social, political, and cultural forces which have shaped it. It includes a study of the music of the church, royal patrons of music, nationalism in music, music and politics, music and industry, and music and entertainment. Because of the social interpretation given music, this course is particularly recommended to majors in the social studies.

Credit: 2 semester-hours

MUSIC 420. *The Art Song*

This course provides a survey of the art song and includes a detailed study of the art songs of Beethoven, Schubert, Schumann, Brahms, Wolf, and Strauss. Special attention is given to the relationship of music and poetry.

Credit: 2 semester-hours

MUSIC 422. *Chamber Music*

This course provides a survey of chamber music and includes a detailed study of the string trio, quartet, and quintet by Haydn, Beethoven, Schubert, Brahms, Debussy, Bartok, and Schoenberg. The content of this course is related to the musical season in New York.

Credit: 2 semester-hours

MUSIC 423. CHORAL MASTERWORKS

This course provides a survey of choral masterworks from Palestrina to Stravinsky. It includes a detailed study of Palestrina's *B Minor Mass*, *St. Matthew Passion*, Handel's *Messiah*, Beethoven's *Missa Solemnis*; Mendelssohn's *Elijah*; Verdi's *Requiem* and other great choral works. The content of this course is related to the current musical season in New York City.

Credit: 2 semester-hours

MUSIC 424. *A Survey of Wind Instrument Music*

This course includes music for full band, small ensemble, and solos with emphasis on literature available for brass and woodwind players in high school. A laboratory band as well as numerous ensemble groups are formed by members of the class so that performance of all music under consideration is possible. Special attention is given to the music originally composed for wind instruments. Music from all publishers is available for examination and evaluation.

Credit: 4 semester-hours

MUSIC 425. *Music of the Romantic Period*

This course deals with the romantic spirit in music as exemplified by the works of Schubert, Schumann, Mendelssohn, Chopin, Liszt, and others. It includes a study of program music, song literature, and the rise of national schools of musical composition. Representative works are studied through performance.

This course provides a survey of Russian music from the Czarist regime to the modern Soviet. It aims to interpret Russian music in terms of the social, political, and cultural forces which have shaped it.

ings, and radio listening. Special attention is given to parallel aspects of Romanticism in literature and the visual arts.

Credit: 2 semester-hours

MUSIC 426. *Survey of Music Literature*

This is a survey course in Music Literature and includes a study of folk song, art song, oratorio, opera, idealized dance forms, instrumental suite, sonata, symphony, and symphonic poem. Abundant use of musical illustration, directed listening, and music making acquaints the student with great masterpieces of music which should be the possession of every generally cultured person. This course is designed for the general student and aims to make intelligent and appreciative consumers of music. It is a non-technical course and attempts to make intelligent and appreciative radio-listeners and concert goers. Special attention is given to the relation of music to English literature and the social studies.

Credit: 2 semester-hours

MUSIC 428. *Music of Twelve Great Nations*

This course aims to increase understanding among people through a study of the folk and related art music of twelve great nations. Special attention is given to the social, economic, political, and cultural backgrounds of the music of these nations. Because of the social implications of this music this course is recommended particularly to teachers of the social studies. Musical illustrations are given at the piano, through group singing, and through recordings.

Credit: 2 semester-hours

MUSIC 429. *A Cappella Choir and Choral Conducting*

This course deals with the theory and practice of the *a cappella* choir. It includes a study of the principles of group tone production, phonetics as related to singing, tuning, posture, techniques of choral conducting, interpretation, and score reading. A feature of this course is the study of a selected list of choral literature suitable for use in school, church, and community. Outstanding students are given an opportunity to conduct the College A Cappella Choir.

Prerequisite: MUSIC 301

Credit: 2 semester-hours

MUSIC 460. *Musical Studies in Europe*

This field-study course gives an opportunity to study by direct observation major European musical events of the summer season together with visits to famous places in the history of music. Beginning on July 2nd the tour extends to September 3rd covering the countries of France, Germany, Austria, Switzerland, the Netherlands, and Italy. Among many other things opportunities are provided to attend the Richard Wagner Festival in Bayreuth and the Salzburg Musical Festival and to visit the musical shrines and museums in Vienna and the LaScala Opera House and museum in Milan. Famous places such as London, Paris, Rome, Florence, Venice, Amsterdam, Frankfurt, Stuttgart, and Lucerne are included in the itinerary. Students who are registered for credit are required to present a written report at the end of the trip.

Credit: 6 semester-hours

MUSIC 499A. *Problems in the Teaching of School Music*

This is a post-student teaching course. It aims to (1) evaluate student-teaching experiences; (2) give an opportunity to the student to share with his classmates the problems encountered in student teaching and to seek a possible solution for the same; (3) meet shortages in teacher preparation not provided for in previous courses; (4) give the student a unified view of school music education before he enters the teaching field. The content of this course is determined largely by the expressed needs of the students.

Credit: 2 semester-hours

MUSIC 499B. *Workshop in School Music*

This course is designed primarily for music teachers-in-service who wish to work out projects for use in their respective schools. The content of this course is determined by needs in the field. It may include folk song dramatizations, small vocal and instrumental ensembles, the integration of music with other subjects in the curriculum, music for boys, visual aids in music pageants, festivals, and materials for special programs. This course provides the teacher with a number of units of work suitable for classroom use.

Credit: 2 semester-hours

HEALTH EDUCATION 401. *Methods and Materials in Health Education*

This course prepares the teacher to assume the responsibility for organizing and conducting a program of health instruction. The coordination of health with other subject-matter fields and the evaluation of textbooks and audio-visual materials are given special consideration.

Credit: 2 semester-hours

HEALTH EDUCATION 407. *Prevention and Care of Athletic Injuries*

This is a lecture and laboratory course designed to acquaint the student with ways to prevent and to care for the common injuries sustained in athletics.

Credit: 2 semester-hours

HEALTH EDUCATION 408. *Behind-the-Wheel Driver Education and Driver Training*

Part I

This part consists of a minimum of 40 hours of class recitations and discussions for which home reading and study have been assigned. The following topics are included: (1) history and development of driver education and training programs; (2) objectives of driver education; (3) local, state, and national traffic safety programs; (4) driver qualifications; (5) psycho-physical testing; (6) curriculum content of school courses in driver education and training; (7) construction, operation, and maintenance of automobiles; (8) traffic laws and driver licensing; (9) traffic engineering; (10) pedestrian education and protection; (11) equipment for teaching driver education; (12) liability, costs, and insurance; (13) planning driver education as a part of the daily program of the high school; (14) public relations; (15) records and reports; and (16) visual aids in teaching driver education.

Part II

This part consists of a minimum of 20 hours devoted to the following: (1) behind-the-wheel instruction; (2) demonstrations and student-teacher practice in the car; and (3) road tests in traffic. Home reading and study are required in preparation for these projects.

Prerequisite: License to drive a car

Credit: 2 semester-hours

HEALTH EDUCATION 411. *School Health Services*

The student is familiarized with the health services available in the school. The part which the teacher plays in coordinating his activities with the school medical staff is emphasized.

Credit: 2 semester-hours

PHYSICAL EDUCATION M405. *Management of Athletic Activities*

The student is provided with information essential to the good management of an intra-mural and interscholastic athletic program. Some of the major problems to be considered are: education values, health and safety of participants, insurance, transportation, scheduling, management of finances, budgeting, maintenance of play areas, care of supplies and equipment, state and local athletic associations, and the organization of leagues and meets.

Credit: 2 semester-hours

PHYSICAL EDUCATION W405. *The Program of Physical Education for High-School Girls*

Consideration is given to the entire physical education program for girls in junior and senior high school including: preparation of courses of study, methods of instruction, and extra-curricular activities. Active participation in the activities may be required by the instructor.

Credit: 2 semester-hours

PHYSICAL EDUCATION 409. *Organization and Administration of Physical Education*

The details of organizing the units of the physical education programs are discussed. Various topics, such as legislation, financing, curriculum construction, grading, excuses, plant facilities, supplies and equipment, and office management are considered.

Credit: 2 semester-hours

PHYSICAL EDUCATION 410. *Water Safety and First Aid*

This course includes intensive instruction in swimming, diving, water sports, boating, canoeing, water safety, and first aid. Students can qualify for Red Cross certificates during this course.

Credit: 2 semester-hours

THE NEW JERSEY STATE SCHOOL OF CONSERVATION

The six State Teachers Colleges, the State Department of Education, and the State Department of Conservation and Economic Development jointly operate the New Jersey State School of Conservation at Lake Wapalanne in Stokes State Forest, Sussex County. Credit for the courses given at the New Jersey State School of Conservation may be applied toward the Master's degree at the New Jersey State Teachers Collegés, subject to approval in advance by the institution concerned. Students are advised to check with their advisers relative to the application of these credits towards graduate degrees.

The following courses may be offered at the New Jersey State School of Conservation. For complete course descriptions, please refer to the departmental write-ups appearing in this bulletin. Special descriptive announcements may also be had by writing to the New Jersey State School of Conservation, Upper Montclair, New Jersey.

FINE ARTS DEPARTMENT

Fine Arts 415. *School Arts and Crafts with Native Materials*

GEOGRAPHY DEPARTMENT

Geography 420. *Field Geography and Conservation*

INTEGRATION DEPARTMENT

Integration 440. *Camping Education*

Integration 441. *Conservation Education*

Integration 442. *Practicum in Camp Leadership*

Integration 444. *Practicum in Conservation Education*

Integration 480. *Field Science for Elementary Teachers*

HEALTH AND PHYSICAL EDUCATION DEPARTMENT

Physical Education 410. *Water Safety and First Aid*

SCIENCE DEPARTMENT

- Science 405. *Field and Laboratory Studies in Science*
- Science 411. *Problems in Field Studies in Science*
- Science 412. *Field Studies in Science: Biological*
- Science 413. *Field Studies in Science: Physical*
- Science 414. *Conservation of Plants and Animals*
- Science 415. *Conservation of Soil and Water*
- Science 419. *Field Science and Conservation*
- Science 420. *Water Supply and Conservation Problems*

SOCIAL STUDIES DEPARTMENT

- Social Studies 477. *Rural Sociology*
- Social Studies 482. *Conservation and Rural Economic Life*
- Social Studies 494. *Social Studies and Conservation*

COLLEGES FROM WHICH GRADUATE STUDENTS NOW MATRICULATED RECEIVED THEIR BACCALAUREATE DEGREE

A & T College, Greensboro, N. C.	Panzer College
Bates College	Pennsylvania State College
Bennett College	Pratt Institute
Bible Baptist Seminary	Rider College
Bloomfield College	Rutgers University
Bob Jones University	St. Bonaventure College
Boston University	St. John's University
Bowling Green College, Ohio	St. Lawrence University
Bradley University	St. Peter's College
Brooklyn College	Seton Hall University
Brown University	Smith College
Bucknell University	State Teachers College at Jersey City
Catholic University	State Teachers College at Kutztown
Chestnut Hill College, Penna.	State Teachers College at Montclair
College of St. Elizabeth	State Teachers College at Newark
Cornell University	State Teachers College at Paterson
Drew University	State Teachers College at Trenton
Duke University	State Teachers College at West Chester
East Stroudsburg State Teachers College	Swarthmore College
Eastern Kentucky State Teachers College	Syracuse University
Fairleigh Dickinson College	Teachers College, Columbia University
Fordham University	Temple University
Franklin & Marshall College	Tusculum College
Georgetown University	Union College
Goucher College	University of Kentucky
Hampton Institute	University of Maine
Holy Cross College	University of Maryland
Hood College	University of Miami
Hope College	University of Michigan
Howard University	University of Nevada
Indiana State Teachers College	University of North Carolina
Keuka College	University of Pennsylvania
Lafayette College	University of Wisconsin
Lebanon Valley College	Upsala College
Lehigh University	Utah State Agriculture College
Limestone College	Vassar College
Maryville College	Wabash College
Mt. Carmel College, Canada	Washington & Lee University
Muhlenberg College	Washington University
Muskingum College	Wesleyan University, Connecticut
New Jersey College for Women	West Virginia Wesleyan
New York University	Western Maryland College
Ohio State University	Wheaton College
	Yale University

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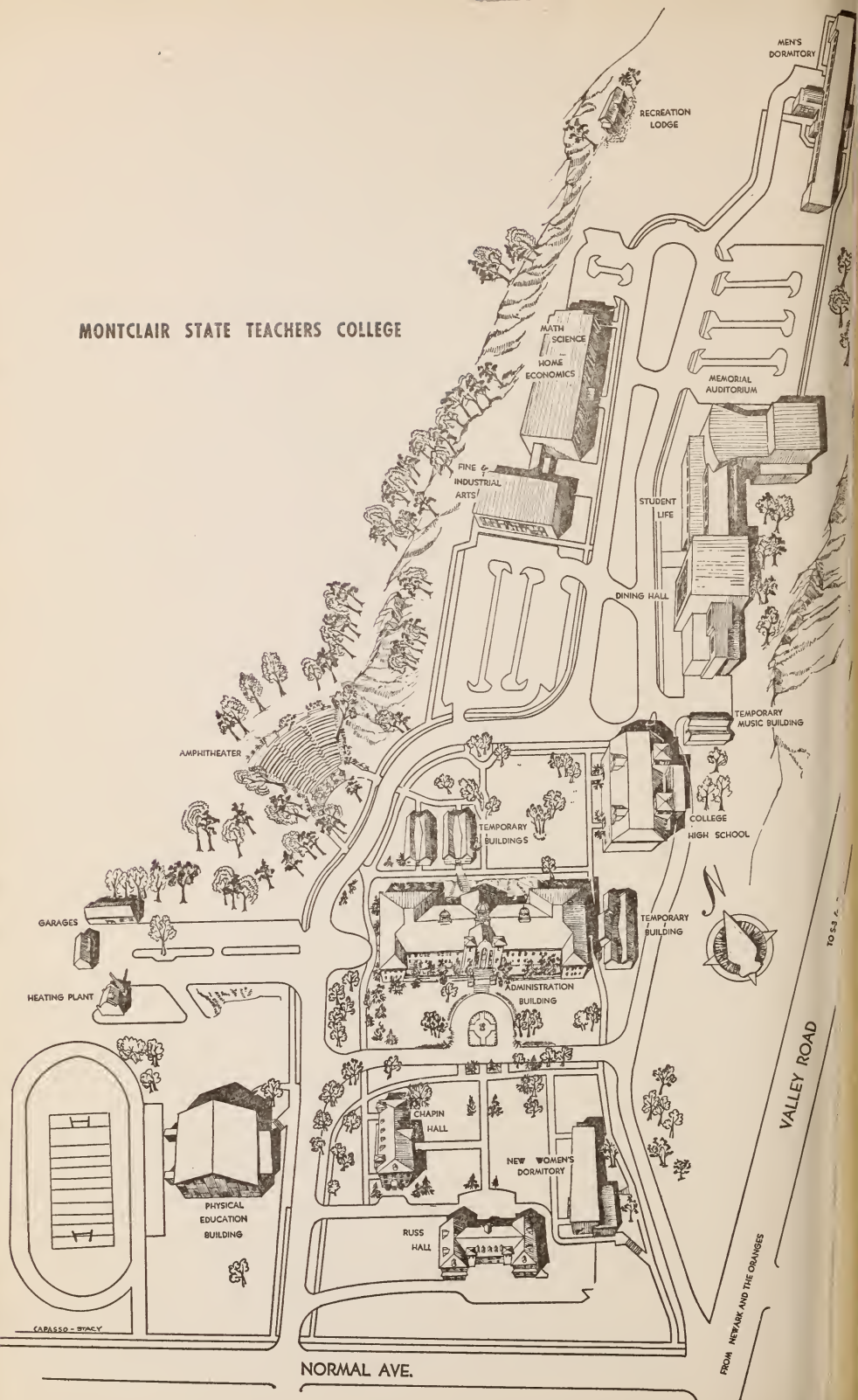
**NEW JERSEY
STATE TEACHERS COLLEGE
AT MONTCLAIR**

**GRADUATE BULLETIN
1957-1959**



UPPER MONTCLAIR, NEW JERSEY

MONTCLAIR STATE TEACHERS COLLEGE



BULLETIN

OF THE

New Jersey State Teachers College at Montclair

GRADUATE DIVISION

NEW JERSEY STATE TEACHERS COLLEGE

Montclair

1957

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TABLE OF CONTENTS

	<i>Page</i>
Officers of Administration	5
Graduate Faculty	6
GENERAL INFORMATION	9
History	9
Location	9
Library	9
Living Accommodations	10
Administration	10
Purposes	10
Organization	11
Student Teaching	12
Admission and Matriculation	12
Advanced Credits	13
Student Load	13
Requirements for A. M. Degree	13
Comprehensive Examinations	14
Application for Conferment of Degree	14
General Restrictions	15
Fees and Service Charges	15
The Master's Thesis and Research	15
Fields of Work	17
DEPARTMENT OF BUSINESS EDUCATION	18
DEPARTMENT OF ENGLISH	26
DEPARTMENT OF FOREIGN LANGUAGES	43
DEPARTMENT OF INDUSTRIAL ARTS EDUCATION	44
DEPARTMENT OF INTEGRATION	50
DEPARTMENT OF MATHEMATICS	70
DEPARTMENT OF SCIENCE	82
DEPARTMENT OF SOCIAL STUDIES	97
OTHER COURSES THAT MAY BE USED AS	
ELECTIVES	125
Fine Arts	125
Geography	127
Music	130
Health Education	135
Physical Education	136
New Jersey State School of Conservation	138
Colleges from Which Graduate Students Now Matriculated	
Received Their Baccalaureate Degrees	140

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FREDERIC HAROLD YOUNG, PH.D.

Associate Professor of English and Education

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DANIEL BROWER, PH.D.

Consulting Psychologist, St. Barnabas Hospital, Newark
LEONARD BUCHNER, A. M. English Teacher and Reading Specialist,
South Side High School, Newark

EUGÉNIE M. CLAUDE, A.M.

School Psychologist, Montclair Public Schools
PAUL A. DECKARD, M.S.

Elementary School Principal, Montclair Public Schools
NORMAN A. GATHANY, Ed.D. Principal, Glenfield School, Montclair
ABRAHAM GELFOND, PH.D.

Supervisor of Guidance, Linden Public Schools
CLARENCE E. HINCHEY, Ed.D. Superintendent of Schools, Montclair

HAROLD F. HOFFMAN, Ed.D. Superintendent of Schools, Livingston
CHARLES T. LETSON, Ed.D. Reading Consultant, Montclair Public Schools

ROBERT J. POLGLAZE, Ed.D.

Vice-Principal, Bloomfield Junior High School
HARRY M. RICE, A.M. Principal, Bloomfield Senior High School

ADRIAN STRUYK, A.M.

Head of the Mathematics Department, Clifton High School
J. DALE WEAVER, Ed.M. Guidance Director, Mountain Lakes

GENERAL INFORMATION

HISTORY

In 1908 the Montclair State Teachers College first began its teacher-education program as a two-year Normal School. In 1927, by act of the State Board of Education, it was changed to a State Teachers College with four-year curricula leading to a Bachelor of Arts degree and certification to teach in the secondary schools of the State. That the College might better serve teachers in service, extension courses were instituted in 1929 and summer sessions in 1930. The fact that hundreds of teachers in service registered in these programs annually shows the wisdom of the State Department in instituting them. The majority of these teachers held A.B. degrees, and they wished to continue their preparation and receive graduate credit for their work. They, therefore, requested that the College offer courses for graduate credit. To meet this demand, the Commissioner of Education recommended and the State Board of Education voted in June, 1932, that such work be offered and the College be empowered to grant the degree of Master of Arts. Graduate courses were first offered at the State Teachers College at Montclair in the summer of 1932 and have been offered in all regular and summer sessions since. There are now more than six hundred students matriculated in the Graduate Division.

LOCATION

The College is located on the northern edge of Upper Montclair about three miles from Montclair Center. The campus is on the boundary line between Essex and Passaic Counties. Valley Road, the main thoroughfare between Montclair and Paterson, bounds the campus on the east; to the west is the ridge of Watchung Mountain; to the north are Great Notch and Paterson; to the south, Montclair, Newark, and the Oranges.

The College may be reached by the Lackawanna Railroad to Montclair, thence by bus to the campus; by the Erie Railroad to Montclair Heights Station; and by bus from most of the cities in Northeastern New Jersey.

LIBRARY

Conveniently located on the main floor of College Hall is the College Library of 67,000 volumes, with a large reading and reference room and two smaller reading rooms housing the music collection and the Curriculum Laboratory and Textbook Exhibit. The Textbook Exhibit of over 5,000 volumes includes the most recent textbooks in all subjects on both the elementary and secondary levels and curricula from the majority of communities and counties of New Jersey, as well as

outstanding curricula from other states. Special collections include the Webster Memorial Collection of modern poetry, including many first editions and autographed copies; a collection of early science textbooks; a collection of New Jerseyiana; the Roy W. Hatch Collection of Lincolniana; and the Finley Memorial Collection of outstanding books in the field of natural history. Of special interest is the China Institute Library, a permanent loan from the China Institute of New Jersey. The library maintains a complete file of bulletins of the U. S. Office of Education for which this library is designated as an official depository library in the area. The Library is also a depository for the U. S. Census Reports. An up-to-date and widely-used file of pamphlets, maps and pictures, is available to all students.

Most of the books, including the reference collection, are on open shelves to which the students, as well as faculty, graduates, and teachers-in-service, have access and borrowing privileges. This open-shelf policy applies even to the periodical collection which consists of back issues of all but the most ephemeral of over 300 currently received periodicals. Bound volumes of magazines total over 2,500.

Supplementing the College Library is the library of the College High School which is a large, pleasant room housing 4,500 volumes and located in the College High School. These books are catalogued at the College Library and are available through the main catalog as well as through the catalog of the College High School. The High School Librarian works in close cooperation with the members of the College library staff, particularly in the field of literature for adolescents, in which an extensive and up-to-date collection is maintained.

LIVING ACCOMMODATIONS

During the College year graduate students are accommodated in the dormitories whenever possible. The rate for the Summer Sessions is \$14.50 a week including room, breakfast, and dinner. These charges are subject to revision.

ADMINISTRATION

The graduate program of the College is administered with the assistance of two college committees: the Graduate Council appointed by the President of the College, and the Administrative Council which consists of the President, the Dean of Instruction, the Director of Admissions, the Chairman of the Graduate Council, the Director of Personnel and Guidance, and the heads of the major departments.

PURPOSES

The New Jersey State Teachers College at Montclair is a professional school devoted primarily to the interests of secondary education. This objective is the controlling factor in the development

of the curricula, teaching procedures, extra-curricular activities, and college spirit, and tends to unify all the activities of the college—professional, cultural, and social.

Graduate courses are organized to serve the purposes of two groups of students :

Those who wish to matriculate for the degree of Master of Arts :
Graduates of accredited liberal arts and professional colleges.
Secondary teachers, supervisors, principals, and other school administrators, who are graduates of approved colleges.

Those who do not wish to matriculate for the degree :

Students who hold graduate degrees but who wish to continue their professional preparation.

College graduates who wish to take courses leading toward secondary school certification.

Students who are matriculated for advanced degrees in other colleges and universities and who plan to transfer their credits.

Special students taking courses for cultural purposes without reference to credit.

ORGANIZATION

The work is organized to meet the needs of those who wish to do full-time work and of those who are teaching and who wish to take courses in the late afternoon, evening, or on Saturday morning. The courses in the Part-Time and Extension Division and Summer Sessions are given by members of the college staff and are granted resident credit. It is thus possible for a teacher in service to earn the Master's degree without taking a leave of absence from his teaching position.

Candidates who lack some of the required courses for full limited secondary certification or certification in other professional or special subjects for both elementary and secondary schools may need to register for some undergraduate courses that will not carry graduate credit. Some of the courses that do carry graduate credit may be counted towards the limited certificate as well as towards the Master's degree. Students holding A.B. degrees from other colleges are permitted to matriculate for the Master's degree here prior to obtaining certification ; but by the time the degree is to be conferred, they must have qualified for a teaching certificate. In all major departments except that of the Department of Integration this must be a secondary teaching certificate. Students who are working for certification should write to the Secretary of the State Board of Examiners, 175 West State Street, Trenton, New Jersey, submitting a transcript of all their previous college work and ask for an evaluation as to what they are lacking for certification.

Graduate students who must meet certification requirements as well as the requirements for the Master's degree will find it necessary to spend additional time on the campus and in student teaching. Supervised student teaching, required for certification, does not carry graduate credit.

STUDENT TEACHING

Graduates of other colleges who wish to do their student teaching through the New Jersey State Teachers College at Montclair should obtain from the Integration Office the mimeographed statement outlining the conditions under which it can be done.

Students who desire to meet the State requirement in Supervised Student Teaching must register for that experience with the Director of the Part-Time Division.

ADMISSION AND MATRICULATION

The applicant for admission must be a graduate of an accredited college or university and must present evidence of his qualifications for advanced study as shown by a high scholastic record, training, and experience. Note that matriculation for the Master's degree must be completed before the candidate has acquired more than eight semester-hours of graduate credit.

Steps in the matriculation process are as follows:

1. The candidate secures from the Graduate Office an application which must be completed and returned to that office.
2. The candidate will have his college send official transcripts of all undergraduate credits (if the applicant is not a graduate of Montclair), to the Chairman of the Graduate Council. Official transcripts should be on file in the Graduate Office before the time of registration for graduate courses.
3. After the application and transcripts have been received and reviewed in the Graduate Office, the candidate will be invited to confer with the Chairman of the Graduate Council.
4. The candidate will next confer with the graduate adviser in the department in which he expects to do his work, and the adviser will develop a program of courses with him.
5. The candidate will then have a final brief conference with the Chairman of the Graduate Council. Following this, the candidate will be advised in writing of the decision of the Graduate Council and will be furnished with a statement of the work to be completed.

Final action on all applicants is vested in the Administrative Council.

Announcements are made with the offerings of courses each semester as to when the departmental advisers and the Chairman of the Graduate Council may be consulted.

ADVANCED CREDITS

For graduates of institutions other than the New Jersey State Teachers Colleges and Rutgers University (the State University), a minimum of thirty-two semester-hours of residence work is required. In the case of graduates of the New Jersey State Teachers Colleges and the State University a maximum of eight semester-hours of graduate work from other accredited institutions may be offered toward the Master's degree.

Students who are eligible to transfer from other institutions graduate credits earned prior to matriculation must submit official transcripts of these credits for consideration by the Graduate Council.

Candidates eligible to take work at other graduate schools and who desire to do so after matriculation must first secure written permission from the head of the department concerned at Montclair and from the Chairman of the Graduate Council, if the credits so gained are to be applied toward the Master's degree.

Not more than eight semester-hours of graduate credit will be granted for work taken prior to matriculation. For this reason, candidates should apply for matriculation before the completion of that amount of work.

STUDENT LOAD

Graduate work should involve careful and intensive study with ample time to explore areas which may warrant further study.

Twelve to sixteen hours of work per semester is considered a full-time program for the graduate student in residence.

For teachers employed full time, six semester-hours of work in any one semester shall be the maximum load with four semester-hours being recommended.

In the regular six-week summer session, the maximum load shall be eight semester-hours. The Graduate Council strongly recommends that the student consider six semester-hours of work a full program.

REQUIREMENTS FOR A.M. DEGREE

Thirty-two semester-hours of graduate credit are required for the Master of Arts degree.

Each student selects a major field in which he must complete such courses as are prescribed.

Each department except that of Integration requires at least thirty semester-hours of credit in its field as a prerequisite to matriculation.

The Integration Department requires twenty-four semester-hours in its field; all other departments require a minimum of eighteen semester-hours.

For graduates of teachers colleges, at least six semester-hours of the required total must be taken in the Department of Integration. The total amount of work in Integration Department courses required of graduates of other colleges is also dependent on the number of credits needed for teacher certification. Some of these courses will count only for certification and not towards the requirements for the Master's degree other than the requirement that each candidate at the time of matriculation must have a New Jersey teacher's certificate. INTEGRATION 503 is required of all students matriculated in the Graduate Division.

Four of the total credits may be satisfied by a thesis which meets the approval of the Graduate Council.

A candidate who is matriculated for the A.M. degree after September 1, 1952, must attend as a full-time graduate student one summer session or one regular semester.

An average of "B" or better is required for work submitted for the Master's degree. No credit is given for work below "C."

Certification to teach in New Jersey or a letter of eligibility is a prerequisite to the conferment of the Master's degree at the Montclair State Teachers College. Those matriculated in subject-matter areas must be certified to teach the major subject in secondary school. Students matriculated in the Integration Department need either elementary or secondary certification.

Work for the degree must be completed within five years of the date of matriculation.

COMPREHENSIVE EXAMINATIONS

A comprehensive departmental examination is required in all departments. This examination may be both written and oral. The examination is given by the department in which the student does his major work. No academic credit is given for the examination.

In some departments the thesis may be offered in place of the written comprehensive examination. Usually the oral examination is required in case a thesis or research problem is presented in lieu of the written examination.

APPLICATION FOR CONFERMENT OF DEGREE

Candidates must file with the Registrar an application for conferment of the degree before November 30 of the college year in which the work is to be completed. Application blanks for this purpose may be secured from the Registrar. The burden of responsibility for the request rests with the candidate. This is of special significance to the teacher in service who may have distributed the graduate work over four or five years.

GENERAL RESTRICTIONS

No credit is granted for :

1. Correspondence work.
2. Junior-college courses.
3. Graduate courses with mark below "C."
4. Supervised teaching.
5. More than eight semester-hours of graduate credit prior to matriculation.
6. The comprehensive departmental examination.
7. More than six semester-hours of graduate credit earned in extension (off-campus) courses.
8. Graduate work taken elsewhere unless the student is a graduate of one of the New Jersey State Teachers Colleges or the State University, and in such cases not more than eight points.

FEES AND SERVICE CHARGES

Eleven dollars (\$11.00) per semester-hour to residents of New Jersey and those non-residents who teach in New Jersey public schools.

Thirteen dollars (\$13.00) per semester-hour to non-residents of the State of New Jersey who do not teach in New Jersey public schools.

Late Registration Fee, two dollars (\$2.00).

Service charge, fifty cents (\$.50) per semester-hour.

Supervised Student Teaching (if required), sixty-six dollars (\$66.00).

Dormitory fees including room, breakfast, and dinner for a summer session, fourteen and one-half dollars (\$14.50) a week.

These charges are subject to revision.

All charges are payable during the registration period.

THE MASTER'S THESIS AND RESEARCH

The writing of a Master's thesis is optional. The election to write a thesis should be considered in terms of the subject matter, the opportunities to carry out research on a standard acceptable for a thesis, and the needs of the individual in relation to his plan of graduate study.

Some departments have in effect the equivalent of a thesis requirement except for the formal filing of the complete typed thesis following standard style.

Students in the Social Studies Department complete either a Master's thesis or a Master's essay on a problem which each individual chooses for specialization. The student is then given an

oral examination on the paper before a seminar of members of the Social Studies Department.

An extensive research report is completed by every student in the course, INTEGRATION 603, *Principles and Practices of Research*. Students who plan to write a thesis are encouraged to take this course prior to the work for the thesis.

Other departments have research courses which follow the basic course, INTEGRATION 503, *Methods and Instruments of Research*, and which are designed to give the student a good foundation for thesis work. These special departmental provisions are outlined in each departmental statement of requirements.

Students writing a thesis must register with the Chairman of the Graduate Council for the course, GRADUATE 500, *Master's Thesis* for four semester-hours, with the approval of their advisers.

The following information is of aid to students submitting Master's theses:

a. Choice of Topic and Plan of Research

The topic and plan of research will be worked out in consultation with the head of the student's major department. A sponsor will be appointed by the head of the department.

b. Presentation of Outline for Proposed Research

The outline for the proposed research for the thesis must meet the approval of the sponsor, the head of the department concerned, the Graduate Council, and the Dean of Instruction.

c. Mechanics of the Thesis

Each thesis student should be guided by William G. Campbell's *Form and Style in Thesis Writing* which may be borrowed from the Library or purchased at the College Bookstore.

d. Submitting the Thesis

A typewritten copy of the thesis must be submitted to the sponsor who, if he approves of it, will submit the thesis to a reading committee. This should be done not later than six weeks prior to the date of graduation. Any changes recommended by the reading committee must be made by the candidate. Three typewritten copies of the thesis, as finally approved, must be presented by the candidate to the head of his major department at least two weeks before the date of graduation. Final acceptance rests with the Administrative Council.

e. An acceptable thesis shall show evidence that:

1. The candidate has comprehended the essentials of his problem, followed a well-organized plan of work, and offered satisfactory solutions.
2. The candidate has made an independent and intensive study of his problem.

3. The candidate has made a comprehensive study of the literature of his subject.
4. The candidate's conclusions are justified by his findings.
5. The candidate has a practical working knowledge of research methods.
6. The thesis is not a duplicate of a similar study.
7. The data involve a sufficient fund of information to make the findings significant.
8. The thesis is of definite value to the teaching profession.

FIELDS OF WORK

Majors in graduate work are offered in the fields of Administration and Supervision, Biology, Business Education, English, Industrial Arts, Mathematics, Personnel and Guidance, Physical Science, Science, and Social Studies. In each curriculum there is a core of educational courses and major subject-matter courses. The amount of each type depends on the candidate's undergraduate work and is determined by the student's graduate committee. The work in Administration and Supervision and in Personnel and Guidance is limited largely to professional courses in order to meet the State certification requirements.

Students choosing a major field of study at the graduate level should keep in mind that certain experience requirements are needed in the fields of Administration and Supervision and Personnel and Guidance. Enrollment in certain Integration courses is limited to those who are having or who have had actual teaching experience. For details see page 50.

DEPARTMENT OF BUSINESS EDUCATION

The graduate work in the Department of Business Education is designed to prepare teachers of business education for administrative, supervisory, specialized work or master teaching in the field of business education. In order to attain these objectives the candidate has an opportunity to supplement his undergraduate program and to explore advanced areas of work in accordance with his individual background, experience, achievement, and professional needs.

Graduate work toward the Master of Arts degree in Business Education presupposes the completion of an undergraduate major in business education, or its equivalent. The undergraduate major is based on the requirements as established by the New Jersey State Board of Education. For further details see the undergraduate bulletin.

In lieu of four of the thirty-two semester-hours of credit required for the Master of Arts degree, the candidate may write a thesis giving the results of some study in the field of business education or its teaching. This study may be made only after consultation with the Chairman of the Business Education Department. Plans should be made to have such a study in its final form and approved by the Department of Business Education by May 1st of the year in which the degree is expected to be conferred.

All candidates for the Master of Arts degree in Business Education must pass a comprehensive examination before they are granted the degree. This examination is given the first Saturday in April and the last Saturday in July for those candidates anticipating graduation. It is general in nature and is intended to test the candidate's maturity of thought with respect to business education.

GRADUATE PROGRAM OF STUDIES

MASTER OF ARTS DEGREE IN BUSINESS EDUCATION

Division I. Required Integration Department Courses (6 s. h. required)

Int. 503.	Methods and Instruments of Research	2 s. h.
Int. 500A.	Basic Educational Trends	2 s. h.
Elective	To be chosen on recommendation and approval of the Chairman of the Department of Business Education	2 s. h.

Division II. Research Seminar, Field Work and Thesis (8 to 10 s. h.)

B. E. 501.	Research Seminar in Business Education (required of all candidates)	4 s. h.
Graduate 500.	Thesis*	4 s. h.
B. E. 532.	Field Studies and Audio-Visual Aids in Business Education	2 s. h.
	or	4 s. h.
B. E. 533.	Supervised Work Experience and Seminar	

*Division III. Required Business Professional Courses**Group A—(4 s. h. required)*

B. E. 502.	Principles and Problems of Business Education	2 s. h.
B. E. 503.	The Business Education Curriculum	2 s. h.
B. E. 504.	Administration and Supervision of Business Education	2 s. h.
B. E. 505.	Tests and Measurements in Business Education	2 s. h.

Group B—(4 s. h. required)

B. E. 520.	Improvement of Instruction in Business Education	
Part A.	General Business Subjects	2 s. h.
Part B.	Bookkeeping, Accounting, and Business Arithmetic	2 s. h.
Part C.	Secretarial Subjects	2 s. h.
Either part may be elected separately. A minimum of two parts must be completed.		

Division IV. Elective Subject-Matter Courses

(8 to 10 s. h. required—dependent on the total accumulated in Division II—to be selected on recommendation and approval of the Chairman of the Department of Business Education.)

* Students writing a thesis will take 501A and will substitute four (4) semester-hours for the thesis in place of 501B. This will count as a total of six (6) semester-hours in research and thesis.

THE GRADUATE COURSES

BUSINESS EDUCATION 501. *Research Seminar in Business Education*

This course deals with research and literature in the field of business education. The emphasis is placed on making the classroom teacher an intelligent consumer of the current research findings and publications related to business education.

Credit: 4 semester-hours

BUSINESS EDUCATION 502. *Principles and Problems of Business Education*

The purpose of this course is to survey the basic principles and practices of business education. Among the topics considered are: history of the high school business program, purposes, attitudes of management and labor toward education, the relationship of general education to business education, and trends in the field.

Credit: 2 semester-hours

BUSINESS EDUCATION 503. *The Business Education Curriculum*

This course is a sequel to Business Education 502 which should be completed as a prerequisite. It deals with the curricula in business education for various levels and types of schools. In this course, the student learns how to evaluate present programs and to make recommendations for needed changes.

Credit: 2 semester-hours

BUSINESS EDUCATION 504. *Administration and Supervision of Business Education*

This course offers an opportunity to study the problems of organizing, directing, and supervising business education programs. Such matters as the functions of the administrator and supervisor of business education, textbook selection, teacher selection, testing programs, conferences, and equipment and layout are considered.

Credit: 2 semester-hours

BUSINESS EDUCATION 505. *Tests and Measurements in Business Education*

This course deals with constructing, administering, interpreting, and evaluating all types of testing materials in business subjects.

Credit: 2 semester-hours

BUSINESS EDUCATION 516. *Business Organization and Management II*

The problem approach is used in this advanced course in considering such topics as business ownership, finances, location and layouts, purchasing personnel, and managerial controls.

Credit: 2 semester-hours

BUSINESS EDUCATION 518. *Advertising II*

This advanced course in advertising offers an opportunity to study in some detail the uses of various advertising media such as newspapers, magazines, radio, television, and direct mail, and to evaluate their effectiveness in terms of campaigns.

Credit: 2 semester-hours

BUSINESS EDUCATION 520A, B, C. *Improvement of Instruction in Business Education*

This course gives the experienced business teacher an opportunity to study the content, methods, teaching aids, and evaluation procedures in at least two * of the three specialized fields:

BUS. ED. 520A.* *General Business Subjects*

Credit: 2 semester-hours

BUS. ED. 520B.* *Bookkeeping, Accounting, and Business Arithmetic*

Credit: 2 semester-hours

BUS. ED. 520C.* *Secretarial Subjects*

Credit: 2 semester-hours

Note: A minimum of two (2) parts of Bus. Ed. 520 must be completed.

BUSINESS EDUCATION 532. *Field Studies and Audio-Visual Aids in Business Education*

This course gives the classroom teacher an opportunity to visit and evaluate some of the practices of many business offices, industries, and retailing organizations located in the metropolitan area. It also provides for a study of the many audio and visual aids available for use in business classes.

Credit: 4 semester-hours

BUSINESS EDUCATION 533. *Supervised Work Experience and Seminar*

The graduate student who has not had extensive business experience has an opportunity to work full-time for six weeks during the summer in a business position under College supervision. An evening conference is held weekly to discuss problems related to the work experience program.

Credit: 4 semester-hours

BUSINESS EDUCATION 540. *Auditing*

This course seeks to develop the meaning and techniques of auditing procedure. It includes practice in the fundamental mechanics of auditing as well as in the making of the formal report on an audit.

Prerequisite: 8 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 541. *Tax Accounting*

The primary purpose of this course is to give a comprehensive picture of the Federal Tax structure, and to provide training in the application of basic principles to specific problems of the individual and corporation.

Prerequisite: 6 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 542A. *Advanced Business Law Cases I*

This course presupposes a knowledge of the basic principles of business law. It is designed to furnish a broader understanding and background in areas requiring considerable training to be effective in the classroom. Cases are concerned with the topics of contracts, negotiable instruments, and insurance.

Credit: 2 semester-hours

BUSINESS EDUCATION 542B. *Advanced Business Law Cases II*

This advanced law course is a continuation of Bus. Ed. 542A, but course 542A is not a prerequisite. A basic knowledge of the principles of law is, however, required. The course includes a further study of law cases pertaining to bailments, carriers, sales, property, landlord and tenant, torts, and business crimes.

Credit: 2 semester-hours

BUSINESS EDUCATION 543A. *Advanced Accounting I*

The content of this course emphasizes an intensive study of the items making up accounting statements and the principles of valuation and income determination. Problem solving is an integral part of the course. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 543B. *Advanced Accounting II*

This course is a continuation of Bus. Ed. 543A, but course 543A is not a prerequisite. Topics treated include consignments, agency and branch accounting, consolidations, receivership accounting, estate and trust accounting. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 544A, B, C, D. *Workshops in Secretarial and Clerical Practice, Advanced Stenography, Typewriting, Office Machines*

These workshops which run simultaneously when the class is small provide an opportunity for the study, planning, and development of teaching materials and projects fitted to the particular situation in which the person is teaching. The workshops are held in the office-practice room where equipment and reference materials are available. Instruction is on an individual and small-group basis with occasional seminar meetings of the entire group. This is a class where ideas forced to lie dormant during the busy school year may be brought to fruition. There is complete freedom to experiment on individual teaching problems.

Credit: 2 semester-hours each

SENIOR GRADUATE COURSES

The following courses are not required for the Master's degree in Business Education. With the approval of the Chairman of the Department, they may be used as elective credits.

BUSINESS EDUCATION 403. *Advanced Dictation and Transcription, II*

This course is designed for the teacher of stenography and transcription who wishes to study the problems of dictation and transcription from the viewpoint of his own class situation and also to improve his skill.

Those who take this course should have had a methods course in stenography and have had at least student-teaching experience.

Credit: 2 semester-hours

BUSINESS EDUCATION 404. *Business Economics*

This course deals with the business aspects of economics as related to immediate and long-range post-war problems; operation and government control of public utilities; taxation, government finance, and labor and management problems.

Credit: 2 semester-hours

BUSINESS EDUCATION 406. *Advertising, I*

This course aims to acquaint the student with the social and economic aspects of advertising so that a fair evaluation may be made of its worth as well as its undesirable aspects. Copy appeals, the writing of copy, advertising layouts, and the selection of appropriate types of media for various advertisements are considered. Emphasis is placed on the research aspects of the subject so important today.

Credit: 2 semester-hours

BUSINESS EDUCATION 409. *Consumer Education*

Consideration is given to the role of the consumer in the economy, some of the forces affecting consumer demand, governmental and private agencies aiding the consumer, and the development of intelligent techniques for buying and using consumer goods and services.

Credit: 3 semester-hours

BUSINESS EDUCATION 412. *Project Development in Consumer Education*

This course permits the student to explore in a specialized fashion two major areas of consumer education. Two projects are developed, one on housing and the other on the furnishing of a home. The basic

purposes of this course are to illustrate the handling of material and the procedures that might be used in developing other consumer education units.

Prerequisite: An undergraduate course in consumer education or economics.

Credit: 2 semester-hours

BUSINESS EDUCATION 414. *Merchandising, I*

This course analyzes the problems of how, what, where, and when to buy; the terms of purchasing; tested receiving and marketing procedures; the mathematics of merchandising—setting the retail price, planning mark-up and mark-down; and inventory controls. It is designed to assist the teacher of the prospective or actual small businessman.

Credit: 2 semester-hours

BUSINESS EDUCATION 417. *Marketing*

Marketing is the process of transferring goods from the producer to the consumer. The functions involved in the process, the various channels of distribution, marketing institutions, and the costs of marketing are considered in this course. Such topics as auctions, produce exchanges, wholesalers, retailing, department and mail-order stores, chain stores, cooperatives, profits, and prices are included.

Credit: 2 semester-hours

BUSINESS EDUCATION 418. *Retail Store Management*

The work of the store manager in retail store operation is fully explored in this course. The problems of organization and management as they are encountered in various types of retail stores are discussed. Consideration is given to trends, principles, and practices in small and large stores in both the independent and chain-store fields.

Credit: 2 semester-hours

BUSINESS EDUCATION 421. *Finance and Investments for Families*

This course applies the principles of budgeting, banking, insurance, finance, and investments to the complicated problems facing individuals and families in these areas. It deals with budgets; savings; banking; life insurance; general insurance annuities; pensions; wills; such investments as stocks, bonds, and mutual funds; homes; and small business enterprises.

Credit: 2 semester-hours

DEPARTMENT OF ENGLISH

Graduate study in the Department of English is designed:

1. To increase the student's comprehension and appreciation of the literature of Great Britain and of the United States of America.
2. To introduce current materials and methods for improving instruction in English in the secondary school.
3. To show how language functions in individual expression and in social communication in the language arts; reading, writing, speaking, and listening.
4. To investigate recent experimentation and research in the teaching of English.

REQUIREMENTS IN THE ENGLISH DEPARTMENT

Graduate study leading to the Master's degree in English presupposes an undergraduate major in English of at least thirty semester-hours. Before matriculation, each candidate for the Master's degree secures from the Head of the Department an approved course outline requiring at least eighteen semester-hours in English at the senior-graduate level. Distribution of these courses is as follows:

I. *Required Work in Literature.* Minimum requirements—12 semester-hours

A. American Literature. Minimum requirements—4 semester-hours.

These may be selected from the courses listed below:

Eng. 407, 421, 446, 525, 533, 537, 538, 540, 542, 543, 545A, 545B, 546

B. British Literature. Minimum requirements—6 semester-hours

These may be selected from the courses listed below:

Eng. 402, 404, 407, 420, 421, 446, 502, 503, 505, 506, 515, 518, 521, 531, 532, 535, 540, 542, 544A, 544B, 546

C. World Literature. Minimum requirement—2 semester-hours

This may be selected from the courses listed below:

Eng. 432, 451, 459, 513, 514, 520A, 520B, 524, 528, 530, 534, 536

II. *Required Work in Language Study.* Minimum requirements—
4 semester-hours

A. Language Study. Minimum requirement—4 semester hours

This may be selected from the courses listed below :

Eng. 408, 419, 507, 511, 512, 516

*B. Reading Courses

These courses are as follows :

Eng. 430, Int. 430, Int. 530A, Int. 530B, Int. 532

*C. Speech Courses

These courses are as follows :

Eng. 410, 417, 435, 448, 449, 454, 456, 457, 461A, 461B, 462, 463, 464,
466, 467, 468, 522

*NOTE: Either a course in reading or a course in speech may be offered toward meeting two of the required four semester-hours in this area.

III. *Required Work in the Teaching of English.* Minimum requirement—2 semester-hours

This may be selected from the courses listed below :

Eng. 517, 519, 541

IV. Departmental Examination for which no academic credit may be given

All candidates for the Master's degree in English must pass a written comprehensive examination before the degree is awarded. Information concerning the examination may be secured from the Head of the Department.

The candidate may elect to write a thesis of professional value in the teaching of English in the secondary school. Four semester-hours of credit are granted for this thesis, but this credit cannot be considered part of the minimum eighteen semester-hours unless written permission is secured in advance from the Head of the Department.

GRADUATE COURSES

ENGLISH 502. *Victorian Poetry*

The most important English poets who wrote during the transition from the Victorian to the modern period are read and discussed. An important feature of the course is the analysis and appreciative reading of the lyric poetry of Rossetti, Swinburne, Hardy, Bridges, G. M. Hopkins, Francis Thompson, A. E. Housman, Kipling, and W. B. Yeats.

Credit: 2 semester-hours

ENGLISH 503. *Geoffrey Chaucer and His Times*

Some of the works of Chaucer are read rapidly, others studied intensively, so that the students may acquire a broad general understanding of Chaucer's place in the history of English literature as well as facility in reading and interpreting the medieval text of his stories.

Credit: 2 semester-hours

ENGLISH 505. *Philosophy and English Poets*

This course is designed to show the dependence of such English poets as Wordsworth, Coleridge, Shelley, Keats, Tennyson, and Browning upon the philosophical thinking of their day. The course aims to provide a philosophical background for the reading of teachers of modern literature and for the interpretation of much of the poetry which they teach in high school.

Credit: 2 semester-hours

ENGLISH 506. *John Milton*

This course has for its primary aim the understanding and evaluation of Milton's poetry. Contributory to this end are the following topics: the Puritan struggle for civil and religious liberty; the growth of science in the Seventeenth Century; the life, personality, and prose writings of Milton; his literary heritage and influence; comparison of Milton with the Cavalier Metaphysical poets.

Credit: 2 semester-hours

ENGLISH 507. *Critical Writing*

This course evolves a body of critical principles for judging art and literature, and provides training in the writing of criticism, ranging from comments upon pupils' themes to a full and comprehensive essay upon the work of some outstanding author.

Credit: 2 semester-hours

ENGLISH 511. *The History of Literary Criticism*

The purpose of this course is to familiarize the student with the chief doctrines of the great critics from Aristotle to I. A. Richards and T. S. Eliot and to correlate these critical doctrines with the outstanding writings of each age. By such a study it is possible for the student to evaluate the historical interrelations of expert criticism and literary production. A basic text is used, but much of the information is gleaned from source materials.

Credit: 2 semester-hours

ENGLISH 512. *The Growth and Structure of the English Language*

This course is designed to help the high school teacher understand the structure of modern English, one of the most complicated of contemporary tongues. Through an analysis of the historical evolution of our language, the student discovers the reasons for many of the seemingly illogical and arbitrary characteristics of modern English spelling, grammar, and morphology.

Credit: 2 semester-hours

ENGLISH 513. *The Renaissance*

This course deals with Petrarch and the humanists; Boccaccio and the *Novelle*; the House of the Medici, Savonarola, the Popes; Machiavelli and *The Prince*; Cellini and the *Autobiography*; Castiglione and *The Courtier*; Boiardo, Pulci, Ariosto, and the romantic epic; the drama; the art of Da Vinci, Botticelli, Michelangelo, Raphael, Titian, and others; Rabelais and the *Gargantua and Pantagruel*; Cervantes and *Don Quixote*; Ronsard and the French *Pleiade*.

Credit: 2 semester-hours

ENGLISH 514. *Origin and Development of the Arthurian Legend*

This course deals with the vague and tentative beginnings of the Arthur story in early chronicle and legend; with Geoffrey of Monmouth's pseudo-historical and Chretien de Troyes's romantic treatments; with the great medieval recapitulations of Gottfried von Strassburg, Wolfram von Eschenbach, and Sir Thomas Malory; with the Victorian retellings of Tennyson, Arnold, and Morris; with the musical adaptations of Wagner; and with the modern versions of E. A. Robinson. It includes a detailed history of the development of the legend in its divers forms.

Credit: 2 semester-hours

ENGLISH 515. *Robert Browning*

Browning's characteristic shorter poems are recalled or studied in order to define his fundamental ideas as a writer. This is followed by a study of his longer poems and dramas: the "soul-studies", *Pauline*, *Paracelsus* and *Sordello*; the dramas, *Strafford*, *Pippa Passes*, *A Blot in the 'Scutcheon*, *Colombe's Birthday*, and *In a Balcony*; the translations, *The Agamemnon of Aeschylus*, and *Balaustion's Adventure*; and Browning's masterpiece, *The Ring and the Book*. These works are studied for their literary and philosophical values, as showing the development of Browning as man, poet, and philosopher, and as a reflection of certain phases of Nineteenth-Century life and thought.

Credit: 2 semester-hours

ENGLISH 516. *Language Problems in the English Curriculum*

This course reviews the several theories of language and studies the problem of meaning in order to arrive at a suitable technique for the interpretation of prose and verse. This technique is then applied to the problems of reading, of composition, of speech, and of appreciation of literature. The course has two aims: to increase the student's own skill in dealing with language, and to increase his effectiveness in teaching.

Credit: 2 semester-hours

ENGLISH 517. *Recent Research and Experiment in the Teaching of English*

This course analyzes and evaluates current research in the fields of language, literature, and composition relevant to the teaching of English in the high school, and examines critically recent experimentation in methods of teaching English. The aim of the course is to make available to the student any recent knowledge and experience which may throw light on the problems of English teaching in secondary schools and to evaluate tendencies in this field. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 518. *The Major Romantic Poets*

This course studies the work of Coleridge, Wordsworth, Scott, Byron, Shelley, and Keats. It devotes especial attention to the poems which are best adapted for the reading of high school students.

Credit: 2 semester-hours

ENGLISH 519. *English in the Modern High School*

This is a seminar in which the methods and materials requisite to the development of a program in the language arts (listening, speaking, reading, and writing) are considered.

Credit: 2 semester-hours

ENGLISH 520A and 520B. *Great Books on Education*

Students examine the classics dealing with educational theory and practice which they so often read about but rarely consult: Plato's *Republic*, Xenophon's *Cyropaedia*, Cicero's *De Oratore*, Castiglione's *The Courtier*, Machiavelli's *Prince*, Rabelais's *Abbey of Theleme*, Ascham's *Schoolmaster*, Bacon's *Novum Organum*, Defoe's *Projects*, Milton's *To Samuel Hartlit on Education*, Rousseau's *Emile*, Byron's *Don Juan*, Hughes' *Tom Brown's Schooldays*, Newman's *Idea of a University*, the Arnold-Huxley debates, and the works of John Dewey and Jacques Barzun. This course is recommended for graduate students in the Department of Integration.

Part A—Plato to Rousseau.

Part B—Rousseau to Dewey.

Credit: 2 semester-hours each

ENGLISH 521. *English Literature of Social Problems*

This course surveys English literature from 1800 to 1914, and the principal authors discussed include Shelley, Dickens, Kingsley, Tennyson, Carlyle, Butler, Meredith, Galsworthy, Bennett, Shaw, and Wells.

Credit: 2 semester-hours

ENGLISH 522. *Advanced Phonetics*

This course provides ear-training to develop skill in recognizing and distinguishing atypical English speech sounds, regional differences in pronouncing American English, and foreign sounds heard in English speech. This is followed by extensive practice in transcribing speech sounds into International Phonetic Alphabet symbols and in reading International Phonetic Alphabet transcriptions. A thorough study of the speech characteristics of some geographical region with which the student is personally familiar is required of each student.

Credit: 2 semester-hours

ENGLISH 524. *Five Great Books*

The aim of this course is to broaden and to deepen the student's general cultural perspective by a study of five books which have profoundly influenced present civilization. The actual choice of texts is a cooperative class enterprise. Selections are made from such books as: *The Bible*, Homer's *Odyssey*, Plato's *Republic*, Shakespeare's *Hamlet*, Rousseau's *Confessions*, Goethe's *Faust*, Tolstoy's *War and Peace*, Dewey's *The School and Society*. This course is designed to provide leadership in local "Great Books" meetings.

Credit: 2 semester-hours

ENGLISH 525. *The Development of the American Novel*

The American novel as a contemporary art form is examined in this course. Beginning with the novels of the early Nineteenth Century the course traces the rise and development of the Romantic and the Realistic novel and concludes with an example of American Naturalism. Written criticism of five novels is required.

Credit: 2 semester-hours

ENGLISH 528. *New Perspectives in World Literature*

The point of view of our own democratic culture is surveyed and established in an attempt to see how the literatures of Western Europe, the Middle East, and the Orient have influenced and are influencing modern thinking. Such perspectives are designed to provide adequacy in teaching a world point of view through literature.

Credit: 2 semester-hours

ENGLISH 530. *Dante and His Influence in England and America*

Fully two-thirds of the time of this course is devoted to rereading and reassessment of Dante himself in English translation. When Dante's meaning has been revealed, his continued influence from Chaucer through Sackville, Spenser, and Milton to Rossetti, Longfellow, and T. S. Eliot becomes the subject of investigation.

Credit: 2 semester-hours

ENGLISH 531. *Seventeenth Century Literature*

This course aims to give students an appreciation of the prose style and intellectual content of the best thinkers and writers of the first "modern" century—Bacon, Burton, Walton, Bunyan, Hobbes, Pepys, Dryden; and of the poetic art of Donne and the "Metaphysicals"—Jonson, Herrick, and the "Cavaliers"—Herbert, Cowley, Vaughan, Dryden, and others.

Credit: 2 semester-hours

ENGLISH 532. *The Victorian Novel*

This is an intensive study of the novel in Victorian England. A review of the development of the English novel before this period is followed by studies in the works of Dickens, Thackeray, Austen, Eliot, Trollope, Meredith, and Hardy. Novels studied in the high school are treated professionally in class.

Credit: 2 semester-hours

ENGLISH 533. *Masters of American Literature*

Significant American writers, including Irving, Hawthorne, Poe, Emerson, Melville, Whitman, and Mark Twain, are studied to discover their contributions to American life and to reveal important forces in our national background.

Credit: 2 semester-hours

ENGLISH 534. *Medieval Epic, Saga, and Romance*

This course deals with the chief medieval epics, sagas, and romances from the literature of England, France, Germany, Ireland, Iceland, Wales, and Italy in modern English translation. Attention is given both to those narratives which reflect the life of a particular country and to those which are international and express more generally the spirit of medieval Europe.

Credit: 2 semester-hours

ENGLISH 535. *Eighteenth Century Literature*

Major essayists, poets, dramatists, novelists, and letter writers are read and evaluated in terms of the thought, life, and literary movements of their own time and of their significance for the present generation. Authors studied include Addison, Steele, Defoe, Swift, Goldsmith, Sheridan, Gray, Johnson, Boswell, Cowper, Richardson, Fielding, Sterne, Smollett, and Burke. High-school classics receive special attention.

Credit: 2 semester-hours

ENGLISH 536. *Philosophy of Great Literature*

By studying one or two masterpieces in a given semester this course aims to help the student develop a plan of study to achieve a systematic understanding of the philosophic world-views and life-views implicit in such works as: Aeschylus's trilogy, *The Oresteia*; Plato's *Timæus*; Boethius's *Consolations of Philosophy*; Dante's *Divine Comedy*; Shakespeare's *Hamlet*; Milton's *Paradise Lost*; Pascal's *Pensées*; Goethe's *Faust*; Blake's *The Marriage of Heaven and Hell*;

Dostoievski's *Brothers Karamazov*; Mann's *The Magic Mountain*; Hesse's *Demian*; Henry Adams's *Mont St. Michel and Chartres*; the *Bhagavad-Gita*; Lao-tse's *The Book of Tao*; and Auden's *Collected Poetry*.

Credit: 2 semester-hours

ENGLISH 537. *American Drama in American Democracy*

This course uses plays produced upon the American stage to illustrate the development of democratic concepts from Colonial Days to the contemporary theatre.

Credit: 2 semester-hours

ENGLISH 538. *American Literature of Social Problems*

This course surveys the American literature which presents social problems during the period from 1800 to 1914 in an attempt to discover the attitudes of the various authors toward these problems. The works of such authors as Cooper, Lowell, Thoreau, Whitman, Howells, Bellamy, Garland, and Glasgow are studied from this point of view. Enough of the social background of the period is discussed to give the necessary perspective for the discussion of the literature, but the emphasis is placed on the reflection of the problems in literature and not merely on the problems themselves.

Credit: 2 semester-hours

ENGLISH 539. *Theatre and Society*

Dramatic expression from the time of the ancient Greeks to the present is studied carefully to analyze social, political, and ethical trends as they are reflected in the drama. The members of the course prepare analyses of social trends in contemporary drama. This research provides the basis for reports given during the latter part of the course.

Prerequisite: ENGLISH 102 or its equivalent

Credit: 2 semester-hours

ENGLISH 540. *The Modern Novel*

Emphasis is given to British and American novels since 1870, and the important tendencies of present-day prose fiction are explored. Students are taught how to read a novel with profit, and how to guide and direct the reading of others.

Credit: 2 semester-hours

ENGLISH 541. *The Teaching and Appreciation of Poetry*

This course is both personal and professional. It develops the student's appreciation of poetry as an expression of life and as a form of art, and it considers in detail the aims and methods of teaching poetry.

Credit: 2 semester-hours

ENGLISH 542. *Modern Poetry*

This course deals with the work of contemporary poets, both British and American. Much of the best modern poetry is studied for interpretation and appreciation. The distinctive poetry "movements" that have occurred during the present century are examined as expressions of changing social and artistic ideals. Critical appreciation of poetry is developed through comparison of the diverse styles, themes, and poetic theories present in modern poetry.

Credit: 2 semester-hours

ENGLISH 543. *Contemporary American Literature*

This course studies the major authors and literary movements in America during the contemporary period. Beginning where the course in *Masters of American Literature* normally ends, it is designed to complete a unit in this subject.

Credit: 2 semester-hours

ENGLISH 544A and 544B. *Shakespeare*

This course, in two parts, presents all of Shakespeare's plays as opposed to those taught only in high school, which is the chief concern of English 301B. Here the poet's full development can be seen, providing a complete critical experience. Critical analysis, contentual evaluation, and textual problems are the main areas of concern. Part A deals with the tragedies; Part B, the comedies. The chronicle plays are woven into the discussion.

Credit: 2 semester-hours

ENGLISH 545A and 545B. *American Literature*

This chronological survey reflects the interplay of life and letters in the American scene, examining the political, social, and ethical motivations of the great movements in literature, and reading the separate works in the light of the influences that brought them into being. Part A commences with the Puritan Tradition and ends just as the Civil War is beginning. Part B traces, in life and in literature, the growth of the great democratic tradition in America.

Credit: 2 semester-hours

ENGLISH 546. *Modern Drama*

An historical survey of trends, dramatists, plays, and accomplishments from Ibsen to the latest prize plays on Broadway provides background for this course. An examination of the structure and content of plays to determine what constitutes a good play stimulates appreciation. Students are encouraged to read widely and to see current productions on Broadway.

Credit: 2 semester-hours

ENGLISH 547. *Reading Interests of High School Students*

Through wide reading, study and preparation of bibliographies, and establishing criteria for judging current books, the student is prepared to guide the recreational reading of junior and senior high-school students.

Credit: 2 semester-hours

ENGLISH 548. *Fiction as an Image of World History*

This course presents a sequence of historical and cultural novels which aims to present insight into the eras of man's history from pre-historic to present time. Among novels read are: Jensen, *The Long Journey*; Mann, *Joseph and His Brothers*; Yourcenas, *Hadrian's Memoirs*; Merejowski, *The Romance of Leonardo da Vinci*; Reade, *The Cloister and the Hearth*; and Manzoni, *The Betrothed*.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

ENGLISH 402. *Survey of British Literature to 1798*

This course draws together into a systematic narrative the story of the development of English literature from the beginnings to the romantic triumph of 1798.

Credit: 4 semester-hours

ENGLISH 404. *Survey of British Literature*

This course is a continuation of English 402. It takes up the story with the romantic triumph in 1798 and continues it to the present time.

Credit: 2 semester-hours

ENGLISH 407. *British and American Biography*

Both the old and new types of biography are read and studied in this course, with emphasis upon the Nineteenth and Twentieth centuries.

Credit: 2 semester-hours

ENGLISH 408. *Creative Writing*

Students in this course attempt seriously the standard literary forms in prose and verse.

Credit: 2 semester-hours

ENGLISH 410. *Speech Pathology*

This course deals with diagnostic and corrective procedures, causes, and treatment for major or pathological speech problems including severe stuttering, voice disorders, laryngectomy, cleft-palate, cerebral palsy, and aphasia.

Prerequisites: English 208 and 209

Credit: 2 semester-hours

ENGLISH 417. *Methods in the Teaching of Speech*

In this course a study is made of the objectives of speech education at each grade level; of the problems, approaches, materials, textbooks, and techniques in specific speech areas; of modern trends in instruction; and of the integration of speech with other academic departments of study.

Credit: 3 semester-hours

ENGLISH 419. *Grammar for Teachers*

This course is a study of the basic facts of grammatical relationships in English, and of the current problems of "rules" as opposed to "usage." The primary aim of the course is to acquaint students with the true function of grammar in speech and writing.

Credit: 2 semester-hours

ENGLISH 420. *High School Classics*

This course is a seminar for prospective student teachers on the problem of teaching literature in high schools. The student reads numerous articles on the "classics" vs. the "moderns" controversy, becomes thoroughly acquainted with the contents and aims of the best high school anthologies currently in use, and builds up a working philosophy for his own teaching. Through the continued practice of reporting and discussion leading, the student is enabled to integrate his total experience in college.

Credit: 2 semester-hours

ENGLISH 421. *The Short Story*

This course traces the history of the short story as an evolving literary form, emphasizing the productions of the Nineteenth and Twentieth centuries.

Credit: 2 semester-hours

ENGLISH 428. *The Film and Society*

This course considers the impact of the motion picture on our culture. The film is studied and evaluated as a powerful social and educative force, as an art form, and as an entertainment medium. The origin and development of film techniques are treated, and films are shown at each session, accompanied by analysis and discussion. The scenario as a literary type and the adaptation of prose fiction for film purposes are included in the course content. A laboratory fee of \$5.00 to cover the cost of film rentals accompanies this course.

Credit: 2 semester-hours

ENGLISH 430. *Reading in Secondary Schools*

After examination of recent research concerning reading activities at various age levels, the class examines and evaluates methods devised to develop reading skills, to increase vocabularies, and to improve the comprehension of secondary school students.

Credit: 2 semester-hours

ENGLISH 432. *The Development of the Drama*

The development of the drama is studied in all periods from ancient Greece and Rome through the Middle Ages and the Renaissance to the beginning of modern drama with Ibsen. The emphasis of the course is placed on the major characteristics of the drama and its necessary complement, the theatre. Representative plays are read and discussed.

Credit: 2 semester-hours

ENGLISH 435. *Stagecraft*

This workshop course provides training in construction and painting of scenery and lighting the stage. A minimum of twelve clock hours of craft work is required for credit in this course.

Credit: 2 semester-hours

ENGLISH 446. *The One-Act Play*

This course studies the one-act play as an art form, devoting special attention to plays which are suitable for high school production.

Credit: 2 semester-hours

ENGLISH 448. *Choral Speaking*

As members of a speaking choir, students acquire skill in interpreting various forms of literature suitable for group treatment. Consideration is given to their use in the various grade levels in teaching. Students prepare a group of selections suitable for their particular interest and purpose.

Credit: 2 semester-hours

ENGLISH 449. *Public Speaking*

This is an advanced course in the theory and practice of public speaking. It provides opportunity for training in the more complex speech skills, especially in the techniques of leadership in speech situations and the techniques for making speech responses in co-operative situations.

Prerequisite: ENGLISH 204 or the equivalent

Credit: 2 semester-hours

ENGLISH 451. *Literature and Art in Western Culture*

This course deals with the nature of literature and considers its importance as a factor in the development of international understanding. It deals with the relation between the use of language

in literature and with the methods of art, since the re-creation of experience is a function common to both. Through reading the literature which is being read by our neighbors today, both in Europe and in the Western Hemisphere, students are able to participate in a common experience with them.

Credit: 2 semester-hours

ENGLISH 454. *Training the Speaking Voice*

This is a course in the study of the problems of speech, the development of a pleasing speaking voice with precision in diction, and the application of speech skills to practical speaking situations.

Credit: 2 semester-hours

ENGLISH 456. *Play Direction*

This course covers the choosing and casting, as well as directing, of plays. Scenes are directed for class criticism, and a detailed prompt-book of one play is prepared. Whenever possible, this play is given publicly before a student audience. This course complements English 435.

Credit: 2 semester-hours

ENGLISH 457. *Directing the Assembly Program*

It is the purpose of this course to prepare students to organize and to conduct assembly programs and similar activities. Class lectures and discussions cover all phases of the director's responsibilities. Groups conduct research on suitable program materials and share their findings. Each student prepares a detailed script for one assembly or commencement program.

Credit: 2 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

Some of the contributions which have gone into the making of Chinese literature, such as the *Book of Odes* of Confucius, the poems of Li Po and Tu Fu, the Lute Song, and the Dream of the Red Chamber, are considered in this course. Aside from a general survey of the great literature of China special attention is given to English translations of the masterpieces of Chinese literature. There are twenty-four hours of lectures in the morning; after lunch each day a period of forty-five minutes is devoted to informal talks, storytelling, singing of Chinese songs, and showing of motion pictures. During the workshop period individual students work on specific topics under the guidance of the instructor.

Prerequisite: SOCIAL STUDIES 499—*Introduction to Chinese Culture*

Credit: 3 semester-hours

ENGLISH 461A. *Speech Laboratory Practice*

After the techniques of interviewing, of preparing case histories, of diagnosing speech disorders, of planning therapies, and of determining prognoses have been taught through lectures and demonstration lessons, each student is assigned one or more persons with speech defects for supervised practice in correcting speech disorders. Credit is given on a laboratory basis, and the course meets three hours weekly.

Credit: 2 semester-hours

ENGLISH 461B. *Advanced Speech Laboratory Practice*

This course provides for additional supervised speech correction practice with adults or children with speech disorders. Credit is given on a laboratory basis, and the course meets three hours weekly.

Credit: 2 semester-hours

ENGLISH 462. *Group Discussion and Leadership*

Students are taught the principles of democratic discussion and methods for guiding the committee meeting, panel symposium, lecture, and debate forums. Frequent opportunities to apply these principles and methods are given through discussion of topics chosen by the class.

Credit: 2 semester-hours

ENGLISH 463. *Audio-Visual Aids in Teaching Speech*

The aim of this course is to equip prospective teachers to understand the desirable characteristics; capabilities; and all possible uses of charts, models, projection equipment, and magnetic and disc recorders available for the teaching of speech. The distribution, cost, operation, servicing, and storing of instruments and of supplies are also considered.

Credit: 2 semester-hours

ENGLISH 464. *Speech Psychology*

The mental processes involved in acquiring language and in using it in effective oral communication are reviewed. Problems involving psychological principles as they apply to oral teaching, to audience leadership and control, to the alleviation of stage fright, and to the teaching of speech improvement are considered along with the principles of general semantics.

Credit: 2 semester-hours.

ENGLISH 465. *Speech Arts Activity*

Each speech major is required to earn at least one semester-hour of credit in some supervised speech arts activity, such as: playing a major role in a major production; directing a three-act play or its equivalent; giving a public play reading or lecture recital; directing a series of assembly programs; or directing and producing a series of radio programs.

Credit: 1 semester-hour

ENGLISH 466. *Speech Development: Improvement and Reeducation*

This course is intended for superintendents, principals, and classroom teachers who have little or no background in speech education. Consideration is given to the following topics: (1) speech development; (2) speech difficulties or problems found on the kindergarten, elementary, and secondary school levels; (3) acquisition of good voice and speech characteristics; (4) use of techniques and materials in classrooms to motivate good speech patterns; and (5) ways of setting up and integrating speech education in school systems. Demonstrations with individuals and groups are made, and students are expected to prepare a practical project.

Credit: 2 semester-hours

ENGLISH 467. *Oral Interpretation for the Teacher*

This course is organized as a laboratory to help the teacher develop his potentialities in oral reading. Each student is given many opportunities to read aloud and to participate in informal critiques. Assistance is given in compiling a repertory of selections most useful in daily teaching.

Credit: 2 semester-hours

ENGLISH 468. *Introduction to Audiology*

A comprehensive study of the measurement of hearing is made in this course with attention being given to the educational implications of impaired audition and deafness. A review of the physics of sound and the anatomy and physiology of the auditory mechanism are considered as well as hearing tests, principles and techniques of screening tests, interpretation of test results, types and uses of hearing aids, and educational procedures for the habilitation of the hard-of-hearing or deaf child. Demonstrations and supervised practice in administering pure-tone audiometer tests are provided.

Credit: 3 semester-hours

DEPARTMENT OF FOREIGN LANGUAGES

In answer to the growing demand for graduate work, the Foreign Language Department offers a program based on STUDY ABROAD. Through personal contact and experience, the student, thus, can increase both his knowledge and understanding in respect to the people whose language he is preparing to teach. This means that the student will do part of his graduate work at a selected college in a country where the language of his major is spoken. To assist with this program of STUDY ABROAD, the Foreign Language Department yearly offers scholarships for qualifying applicants. These scholarships are sustained by a Student Exchange Fund. Students who are interested in obtaining a STUDY ABROAD scholarship should consult with the Head of the Department for particulars. This program is open only to graduates of Montclair State Teachers College. Sixteen semester-hours of graduate credit are granted for this work. The remaining sixteen hours necessary for the Master's degree are to be selected from graduate courses offered at Montclair. There is also required a final comprehensive examination in the student's major field and a thesis developed from the study and residence in the year abroad. The thesis will be credited as part of the sixteen semester-hours total allowed for the work in the foreign country. The following plan outlines the work for a Master's degree in the Department of Foreign Languages:

<i>Required Courses</i>		<i>Credits</i>
French 502	<i>Study Abroad</i>	16 semester-hours
or		
Spanish 502	<i>Study Abroad</i>	16 semester-hours
Integration 503	<i>Methods and Instruments of Research</i>	2 semester-hours
<i>Electives</i> (To be selected in consultation with the Head of the Foreign Language Department)		
Integration courses		4 semester-hours
Graduate courses in other departments of the college		10 semester-hours
Total		32 semester-hours

Final comprehensive examination in major field of foreign language.

FRENCH 502. *Study Abroad*

Credit: 16 semester-hours

SPANISH 502. *Study Abroad*

Credit: 16 semester-hours

DEPARTMENT OF INDUSTRIAL ARTS EDUCATION

Graduate work in the Department of Industrial Arts Education is designed to help teachers of industrial arts (1) to become more proficient in teaching through study of recent trends and new developments in the field, (2) to improve organization of the industrial arts laboratory, and (3) to provide a basis for work in supervision and administration. Advanced work in industrial arts and related areas which will meet needs and broaden professional experiences of industrial arts teachers is emphasized.

An undergraduate major as established by the State Board of Education is a prerequisite for matriculation as a candidate for the degree. Individuals who have an undergraduate major in this area, but who do not wish to work toward a degree, may enroll in graduate courses in the department with the consent of the adviser.

GRADUATE PROGRAM OF STUDIES

MASTER OF ARTS DEGREE IN INDUSTRIAL ARTS
EDUCATION

- | | | |
|--------------|---|-------|
| I. | <i>Required Basic Courses</i> | S. H. |
| A. Int. 503. | <i>Methods and Instruments of Research</i> | 2 |
| | (Math. 400. <i>Educational Statistics</i> , is a prerequisite for Int. 503.) | |
| B. | Each student with the approval of his adviser selects four semester-hours of Integration credits. | 4 |
| | (Two 500 level courses for two semester-hours each.) | |
| II. | <i>Research Requirements</i> | |
| | Each student completes six semester-hours of work in this area. | 6 |
| A. | Thesis | |
| B. | Creative Project | |
| C. | Field Study | |
| D. | Seminar Courses | |
| 1. | Ind. Arts 520. <i>Seminar in History of Industrial Arts Education</i> | |
| 2. | Ind. Arts 521. <i>Seminar in Vocational Education in New Jersey</i> | |
| 3. | Int. 535. <i>Vocational Guidance</i> | |
| | Int. 536. <i>Educational Guidance</i> | |
| | Int. 537. <i>Social-Moral Guidance</i> | |

III.	<i>Specialization Requirements in Industrial Arts</i>	
A. Ind. Arts 501.	<i>Curriculum Construction and Course Organization in Industrial Arts Education</i>	3
B. Ind. Arts 502.	<i>Shop Planning and Equipment Selection in Industrial Arts Education</i>	3
C. Ind. Arts 503.	<i>Problems in Teaching Industrial Arts</i>	3
D. Ind. Arts 504.	<i>Research and Experimentation in Industrial Arts Education</i>	3
E. Ind. Arts 511.	<i>Supervision of Industrial Arts</i>	3
F. Ind. Arts 442.	<i>Conservation of Basic Industrial Materials</i>	2
IV.	Electives (3 semester-hours)	3

A TOTAL OF 32 SEMESTER-HOURS ARE REQUIRED FOR A
MASTER OF ARTS DEGREE

COURSE REQUIREMENTS FOR A.M. DEGREE IN INDUSTRIAL ARTS EDUCATION

INDUSTRIAL ARTS 501. *Curriculum Construction and Course Organization in Industrial Arts Education*

This course presents a study of curriculum construction techniques used in developing a program of industrial arts. How to make a course of study and how to develop instructional materials are given special attention. The evaluation of pupil progress based on tests and other evaluative criteria are studied.

Credit: 3 semester-hours

INDUSTRIAL ARTS 502. *Shop Planning and Equipment Selection in Industrial Arts Education*

This is a lecture and laboratory course organized to give basic understanding of the principles of planning a modern laboratory and equipping it. A study is made of standards, and actual practice is given in laying out floor plans, selecting and placing equipment, and studying architectural aspects of a functional building.

Credit: 3 semester-hours

INDUSTRIAL ARTS 503. *Problems in Teaching Industrial Arts*

Problem solving techniques are studied and used in aiding individuals to solve problems which they have encountered in their teaching of industrial arts. Individual and group reports are discussed and analyzed.

Credit: 3 semester-hours

INDUSTRIAL ARTS 504. *Research and Experimentation in Industrial Arts Education*

Each individual is required to plan an experimental project, select the needed materials, organize the procedure, construct the necessary equipment, conduct the experiment, and record the findings.

It is recommended that a minimum of four semester-hours of credit, selected in consultation with the adviser, be taken as a prerequisite to this course.

Credit: 3 semester-hours

INDUSTRIAL ARTS 511. *Supervision of Industrial Arts*

This course presents a study of administrative principles and practices found in the modern laboratory. Special attention is given to the methods used to upgrade in-service teachers, the place of industrial arts in general education, requisitioning supplies, budgeting, distributing supplies, and techniques used in supervising the program.

It is recommended that a minimum of four semester-hours of credit, selected in consultation with the adviser, be taken as a prerequisite to this course.

Credit: 3 semester-hours

INDUSTRIAL ARTS 520. *Seminar in History of Industrial Arts Education*

This course presents the history and development of industrial arts education as well as the contributions of leaders and their efforts to develop a program to meet the needs of individuals for their time. Individual and group study methods are used in tracing the development from its inception to the present time.

Credit: 3 semester-hours

INDUSTRIAL ARTS 521. *Seminar in Vocational Education in New Jersey*

The industrial development of the United States is studied as a background for the development of vocational schools. Emphasis is placed on trade, industrial, and distributive education programs in New Jersey, state and federal legislation, teacher training, and occupational efficiency resulting from the program.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

The following courses are not required for the Master's degree in Industrial Arts Education. With the approval of the Chairman of the Department, they may be used as elective credits.

INDUSTRIAL ARTS 402. *Comprehensive General Shop*

This course presents laboratory experience operated under the principles and philosophy of a general shop, with the possibility of utilizing all of the available shop facilities. Each student has the opportunity to elect the areas of work he is interested in and to plan a general shop program accordingly.

Credit: 4 semester-hours

INDUSTRIAL ARTS 403. *Metal and Power, III*

The third experience in metal and power gives advanced work in these areas. The metal area includes activities in brazing, foundry, machine shop, low pressure welding, and mass production techniques. The power area involves experiences in auto mechanics, power mowers, outboard motors, diesels and other combustion engines, mechanical power, steam power, and hydraulics.

Credit: 4 semester-hours

INDUSTRIAL ARTS 442. *Conservation of Basic Industrial Materials*

In this course the students live for ten days at the New Jersey State School of Conservation, Stokes Forest. Study is devoted to the origin, development, use, and consumption of the basic industrial materials as they exist in their natural state. The materials studied include wood, plastics, leather, ores, petroleum, textiles, and steel. The course material is developed through the use of (1) field trips to the natural sources of supply and basic industries, (2) films concerning the materials and their use in industry, and (3) discussion periods with the specialists of industry and government officials who are responsible for conserving and using these materials.

Note: The fee for this course is \$55.00 which includes tuition, board, lodging, transportation on field trips, and use of recreational facilities.

Credit: 2 semester-hours

INDUSTRIAL ARTS 443. *The Use and Processing of Basic Industrial Materials by Modern Industry*

In this course the students live for ten days at the New Jersey State School of Conservation, Stokes State Forest. Study is devoted to the recognition, use, and processing of the basic industrial materials as done by industrial concerns. The materials studied evolve around the use of ores, wood, fuels, and agricultural products as they are transformed or processed by industry in the making of additional semi-finished raw materials such as plastics, leather, paper, textiles, ceramics, steel, and metal products. The course material is developed through the use of (1) field trips to the industries, (2) films and visual aids concerning the transformation of the basic materials by industry, and (3) discussion periods with specialists of the industry, government officials, and educators.

Credit: 2 semester-hours

DEPARTMENT OF INTEGRATION

Graduate courses in this department meet one or more of three needs: (1) instruction in Administration and Supervision, leading to the A. M. degree and New Jersey certification for one or more of the positions of Subject Supervisor, General Supervisor, Elementary School Principal, Secondary School Principal, Supervising Principal, and Superintendent; (2) instruction in Personnel and Guidance, leading to the A. M. degree and New Jersey certification in guidance; and (3) instruction in advanced professional courses for the classroom teacher.

In pursuit of the above objectives most graduate courses in the Department of Integration are designed for students who are having or have had teaching experience. Other courses presuppose at least a teaching certificate. Enrollment in graduate Integration courses, therefore, is subject to the following restrictions:

1. *Students Who Do Not Have a Teaching Certificate*—Graduate students in this classification may enroll in undergraduate and senior-graduate (400 level) courses in order to meet certification requirements. If there are not enough such undergraduate courses, they also may enroll in the following graduate Integration courses: 500A, 500B, 500C, 505, 540, 550, 551, and 552. (These courses are designated in the descriptions below by a single asterisk *.) No more than eight semester-hours in courses taken prior to matriculation may be counted toward the A.M. degree.
2. *Graduate Students Who Possess a Teaching Certificate But Who Have No Teaching Experience*—Students in this classification may enroll for any of the courses listed in the previous paragraph and also Int. 500D, 500E, 500F, and 503. (These additional courses are designated below by a double asterisk **.) They may count no more than eight semester-hours in any courses earned prior to matriculation for the A. M. degree.
3. *Students Matriculated for the A. M. Degree*—Graduate students working toward an A. M. degree in either the field of Administration and Supervision or Personnel and Guidance are permitted to matriculate only when they are having or have had teaching experience. Students majoring in Personnel and Guidance are required to have two years of teaching experience before the degree can be conferred.
4. Students who plan to remain classroom teachers are not encouraged to seek an A. M. degree in either the field of Administration and Supervision or Personnel and Guidance.

5. Courses in the teaching of elementary school subjects are offered primarily to help graduate students to complete certification in this field. Such courses may be counted toward an A. M. degree only under certain conditions which are outlined by the Integration Department graduate adviser.

I. COURSE REQUIREMENTS FOR THE A. M. DEGREE IN
ADMINISTRATION AND SUPERVISION

- A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience. This experience must be completed prior to matriculation. (Not more than eight semester-hours will be counted toward this degree prior to the completion of the teaching experience.)
- B. Satisfactory completion* of not fewer than 32 semester-hours as follows:

1. Basic Requirements S. H.

Int. 500A. <i>Basic Educational Trends</i>	2
Int. 500D. <i>School Administration I. Functions, Organization</i>	2
Int. 500E. <i>School Administration II. Law and Finance</i>	2
Int. 500F. <i>School Administration III. Community Relations</i>	2
Int. 502. <i>Organization and Administration of the Modern High School</i>	2
Int. 503. <i>Methods and Instruments of Research</i>	2
Int. 504A. <i>Curriculum Construction in the Secondary School</i>	2
Int. 508. <i>Supervision of Instruction in Secondary Schools</i>	2

2. Electives in Integration

The student with his adviser's approval will select a minimum of 8 semester-hours in additional Integration courses numbered 406 or above. 8-16

3. Electives in other departments

A student may count toward the degree not more than eight semester-hours in other departments of the College. He is encouraged to elect courses which will broaden his interests and background. 0-8

Total	32
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NOTES:

1. Graduates from New Jersey State Teachers Colleges may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Chairman of the Graduate Council.
2. Students who are interested in obtaining principals' or supervisors' certificates may obtain mimeographed lists of the courses which will be counted toward these certificates.

*In exceptional cases appropriate substitutions or changes, approved by the department head, may be made in these requirements.

II. COURSE REQUIREMENTS FOR THE A. M. DEGREE IN PERSONNEL AND GUIDANCE

A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience. One year of this experience must be completed prior to matriculation. (Not more than eight semester-hours will be counted toward this degree prior to the obtaining of this certificate and the beginning of this experience.)

B. Satisfactory completion of not fewer than 32 semester-hours as follows:

	1. Basic Requirements (Total of 20 semester-hours)	S. H.
either	Int. 500B. <i>Advanced Educational Psychology</i>	2
or	Int. 550. <i>Child and Adolescent Development</i>	
	Int. 500F. <i>School Administration III, Community Relations</i>	2
	Int. 503. <i>Methods and Instruments of Research</i>	2
	Int. 520. <i>Principles of Mental Hygiene</i>	2
	Int. 521A. <i>Educational and Psychological Measurement in Guidance</i>	2
	Int. 535. <i>Vocational Guidance</i>	2
	Int. 536. <i>Educational Guidance</i>	2
	Int. 537. <i>Social-Moral Guidance</i>	2
	Int. 538. <i>Group Guidance and Counseling Activities</i>	2
	Int. 551. <i>Principles and Techniques of Guidance</i>	2
	2. Primary Electives (Minimum of 4 semester-hours required)	
	Int. 602. <i>Seminar in Guidance</i>	4
	Int. 505. <i>Organization and Administration of Extra-Curricular Activities</i>	2
	Int. 530A. <i>Corrective and Remedial Reading in Secondary Schools</i>	2
	Int. 521B. <i>Psychological Tests in Guidance Programs</i>	2
	Eng. 466 <i>Speech Development: Improvement and Re-education</i>	2
	3. Secondary Electives (Maximum of 8 semester-hours permitted)	
	Courses in related and unrelated subjects in other departments of the College	
	Math. 400. <i>Educational Statistics</i>	2
	Soc. St. 439. <i>The Family and Its Problems</i>	2
	Soc. St. 443. <i>Youth and the Community</i>	2
	Soc. St. 444. <i>The Social Bases of Human Relations</i>	2
	Soc. St. 450. <i>Modern Economic Problems</i>	4
	Eng. 464. <i>Speech Psychology</i>	2
	Int. 409. <i>Radio and Sound Equipment in the Classroom</i>	2
	OR any other courses in the graduate program	

Total

32

NOTE:

1. Graduates from New Jersey State Teachers Colleges may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Chairman of the Graduate Council.

GRADUATE COURSES

*INTEGRATION 500A. *Basic Educational Trends*

This course deals with the historical background which administrators and supervisors, as well as teachers, need in order to evaluate problems and policies in due perspective. It emphasizes the current trends in American society and their bearing upon education. It also considers philosophies concerning the causes of rises and declines in outstanding civilizations and the part education could play among them.

Credit: 2 semester-hours

*INTEGRATION 500B. *Advanced Educational Psychology*

The course covers the various aspects of growth. Individual differences, their measurement, and their bearing on educational practices and principles furnish topics of study and discussion. Principles and laws of learning are reviewed. Some time is given to problems of personality as encountered in school work. The several points of view which have been prominent in the psychology of the past fifty to seventy-five years are examined for their contributions to thinking about human nature.

Prerequisite: An introductory course in psychology

Credit: 2 semester-hours

*INTEGRATION 500C. *Recent Trends in Secondary School Methods*

This course emphasizes the fundamental principles underlying the technique of teaching on the secondary school level. Some of the topics considered are: organization of knowledge, the logical and psychological aspects of method, developing appreciations, social-moral education, teaching motor control, fixing motor responses, books and verbalism, meeting individual differences, guidance in study, tests and examinations, marks and marking.

Credit: 2 semester-hours

**INTEGRATION 500D. *School Administration I: Functions and Organization*

This introductory course in educational administration is concerned with general functions and personnel, as well as with the general organization, of public education on local, State, and national levels. It deals also with Federal-State relations, the State and sectarian education, the expanding scope of modern school systems, types and bases of school organization, and professional ethics.

Credit: 2 semester-hours

****INTEGRATION 500E.** *School Administration II: Law and Finance*

This course acquaints the student with the allied fields of school law and school finance, with special reference to New Jersey. Its topics include basic principles of public school support, taxation, Federal aid, educational finance, legal provisions for school district borrowing, tenure provisions, and rights and duties of school boards and officials.

Credit: 2 semester-hours

****INTEGRATION 500F.** *School Administration III: Community Relations*

This course concerns the relation of the school to other educational efforts of the community. It considers the scope and types of agencies and informal influences of an educational nature, and also the agencies and methods by which the best total co-operative effort can be attained. It deals also with methods and plans of publicity. Constant reference throughout is made to New Jersey localities.

Credit: 2 semester-hours

INTEGRATION 502. *Organization and Administration of the Modern High School*

The following topics are considered: the student personnel, building and revising the high school curriculum, providing for individual differences, making the school schedule, records, the guidance program, pupil participation in government, the extra-curricular program, the health program, the safety program, discipline, library and study hall, cafeteria, the principal's office, and evaluating results.

Credit: 2 semester-hours

****INTEGRATION 503.** *Methods and Instruments of Research*

This course is required of and restricted to all regularly matriculated candidates for the Master's degree without regard to their field of major interest. Its purpose is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student sets up a problem and plans and carries out its solution. It is recommended that this course be taken rather early in the graduate program and precede work in departmental seminar or research courses.

Prerequisite: MATHEMATICS 400 or equivalent

Credit: 2 semester-hours

INTEGRATION 504A. *Curriculum Construction in the Secondary School*

The purpose of this course is to introduce the student to constructive criticism of American culture, to consider the extent to which the secondary school curriculum meets the needs of a changing civilization, and to consider effective means of curriculum construction.

Credit: 2 semester-hours

INTEGRATION 504B. *Seminar in Curriculum Organization*

This course is for students actively engaged in problems of curriculum reconstruction and those who are anticipating committee work in this field. It concerns both the elementary and secondary levels. The work is conducted under seminar or individual guidance, and the hours for the conferences will, therefore, be arranged personally between the student and the instructor. (INTEGRATION 504A or INTEGRATION 548 is prerequisite to this course.)

Credit: 2 semester-hours

*INTEGRATION 505. *Organization and Administration of Extra-Curricular Activities*

The first part of this course considers such general problems of extra-curricular activities as: their growing importance; their relation to the curriculum; the principles underlying their organization, administration, and supervision; and methods of financing. In the second part, an intensive study is made of the home room, the assembly, the student council, clubs, athletics, school publications, and other activities in which the class is especially interested.

Credit: 2 semester-hours

INTEGRATION 508. *Supervision of Instruction in Secondary Schools*

This course emphasizes the more practical phases of supervision which are met most frequently by those engaged in it. Among the topics are: the set-up for adequate supervision, supervision as encouraging and guiding the growth of teachers and the improvement of educational procedures, the supervisory functions of teachers' meetings, discussion groups, general and professional reading, the writing of articles, co-operative curriculum modification, utilization of community resources, and teacher intervisitation.

Credit: 2 semester-hours

INTEGRATION 510. *Seminar in Secondary Administration and Supervision*

In this course the class makes an intensive study of administrative and supervisory problems suggested by the educational events and trends of the year, by the interests and responsibilities of the members of the class, and by educational movements in New Jersey and the country. Each student does an individual piece of research which he reports to the class. This represents advanced work which depends upon previous study or experience in educational administration or supervision. (Prerequisites: INTEGRATION 502 or 601A, and 508 or 601B.)

Credit: 2 semester-hours

INTEGRATION 520. *Principles of Mental Hygiene*

This course is designed to be a general survey of the principles and practices of mental health with special reference to the mental health of teacher and pupil. It involves a thorough grounding in fundamental principles of mental hygiene with much practical consideration of the mental-health values of instructional programs and procedures. Discussion centers in practical efforts to develop wholesome personalities in our schools.

Credit: 2 semester-hours

INTEGRATION 521A. *Educational and Psychological Measurement in Guidance*

This course deals with fundamentals of educational and psychological measurements in guidance: test theory, statistical concepts, test construction, evaluation, and interpretation. The place of tests in the instructional program is stressed.

Prerequisite: This course is open only to those with teaching experience.

Credit: 2 semester-hours

INTEGRATION 521B. *Psychological Tests in Guidance Programs*

This course is designed to familiarize the student with various psychological tests and scales that may be used in guidance programs in the secondary school. The student is given practice in administering many types of group tests. This includes scoring the tests and evaluating the results, with a discussion of ways in which these results may be used. Much time is spent in actual laboratory demonstrations of tests, giving students an opportunity to serve as subjects and as examiners. Class discussion is based upon first-hand information gained through use of the tests, on readings, and on class reports.

Prerequisite: INTEGRATION 521A

Credit: 2 semester-hours

INTEGRATION 529. *Field Work in Guidance*

The aim of the course is to introduce the student to various aspects of guidance through experience in agencies actually dealing with such problems. Students observe and participate in activities of the agencies to which they are assigned and write full accounts of these observations and experiences. Some time is spent in discussing and evaluating these experiences and relating them to the literature of the subject. Prerequisites are: experience in teaching; familiarity with the literature on all aspects of guidance and mental hygiene; and INTEGRATION 500B, 520, and 551. This work is conducted by seminar and individual guidance. The hours for the conferences are arranged personally by student and instructor.

Credit: 4 semester-hours

INTEGRATION 530A. *Corrective and Remedial Reading in Secondary Schools*

This course offers an investigation and interpretation of the reading problems which are found in secondary school classes. A study is made of the causes of reading difficulties, methods of diagnosis, and techniques of remedial and corrective teaching. Particular attention is given to the selection and adaptation of suitable curriculum materials. Guidance is given to teachers with individual case problems of retarded, normal, and superior pupils. Illustrative material is taken from case studies developed by classroom teachers.

Credit: 2 semester-hours

INTEGRATION 530B. *Workshop in Corrective and Remedial Reading in Secondary Schools*

This course is designed for students who are directing or instituting programs of remedial and corrective reading and for those who are teaching individuals and classes in such programs. For the most part each student works intensively on his own teaching problem, receiving suggestions and recommendations as the work progresses. Some topics of common interest are: diagnosis, remediation, evaluation, organization and administration of reading programs; use and cost of materials and equipment; relation to the rest of the educational program of the school.

Prerequisite: INTEGRATION 530A or the equivalent, or considerable experience in remedial work

Credit: 2 semester-hours

INTEGRATION 532. *The Supervision and Teaching of Reading in Elementary Schools*

The place of reading in the entire elementary school program is analyzed. Attention is given to necessary remedial work for junior high school students. Materials and their use in instructional programs are studied with a view toward increasing power. All growth levels are considered. Good first teaching is of primary concern; however, the analysis and correction of certain reading difficulties constitute an important portion of the course.

Credit: 2 semester-hours

INTEGRATION 534. *Community Resources for Guidance*

This course deals with the various agencies, industries, and institutions available in the surrounding communities for use in guiding students. In addition to becoming familiar with the location and nature of these facilities students learn the techniques for arranging student interviews and visits. Class discussion and personal research are supplemented by field trips.

Credit: 2 semester-hours

INTEGRATION 535. *Vocational Guidance*

This course is intended for counselors in the junior and senior high schools to obtain information about the principles and philosophy of vocational education and the techniques of counseling youths who wish to receive pre-employment training, and for counselors of out-of-school groups who are attempting to make readjustments to occupational life. Attention is also given to guidance techniques for job preparation and readjustment, the matching of educational and personal abilities to job specifications, the effects of social legislation on the employment of youths, and a study of techniques used in determining occupational needs and occupational changes.

Credit: 2 semester-hours

INTEGRATION 536. *Educational Guidance*

This course is concerned with the facilities available for education after high-school graduation, the problem of further training for pupils leaving school before completing high school, and the academic problems of students while in school. A brief survey of colleges and college-admission procedures is made.

Credit: 2 semester-hours

INTEGRATION 537. *Social-Moral Guidance*

This course is concerned with the non-vocational and non-academic personal and social problems of pupils as well as with the development of techniques by which counselors can integrate the pupil's personal life with the mores and customs of society. It also includes a study of the possible services of various community agencies and a study of the counselor's relation to problems of discipline and citizenship education.

Credit: 2 semester-hours

INTEGRATION 538. *Group Guidance and Counseling Activities*

This course is concerned with the various techniques for helping individual pupils and for using group activities including role-playing as a guidance technique. The group activities considered include those of home rooms, activity periods, occupation courses, student field trips, placement follow-ups, college nights, and career days.

Credit: 2 semester-hours

INTEGRATION 539. *Elementary School Guidance Services*

This course is designed for guidance counselors in the public schools with particular emphasis on the guidance services that may be offered in grades kindergarten through six. The guidance program, as established in the public schools, envisions supervision and administration of the guidance program from the kindergarten through graduation at grade twelve. It is important, therefore, that the guidance director understand the services that can be made available to the elementary school.

Prerequisite: INTEGRATION 551

Credit: 2 semester-hours

*INTEGRATION 540. *Recreational and Activity Leadership*

It is the aim of the course to furnish each student with practical skills that are of service in dealing with young people of high school age. The practical side is supplemented by a thorough consideration of source material and theory. A partial list of the areas covered in the course follows: how to organize and handle groups, the use of leaders from within the group, indoor games, outdoor games, special hikes, outdoor cooking, camp-fire leadership. Special field trips are provided to observe camps and playgrounds in operation.

Credit: 2 semester-hours

INTEGRATION 548. *Curriculum Construction in the Elementary School*

This course offers an opportunity to review state and city elementary curricula; to discuss the principles of curriculum construction; to collect new teaching materials for the various subjects; and to evaluate, organize, and grade these materials. Teaching procedures in the use of materials are discussed and evaluated in terms of pupil needs, the objectives set up, and the results obtained. This course offers an opportunity to make a special study of the materials and procedures to be used in the supervision of the language arts.

Credit: 2 semester-hours

* INTEGRATION 550. *Child and Adolescent Development*

This course reviews the general characteristics of child and adolescent development: motor and physiological, social, emotional, language, intellectual, and interests and ideals. The influence of home, school, community, and institutional life on child and adolescent development are considered as well as problems of guidance presented by children in the normal course of development and also those presented by deviations from the normal course.

Credit: 2 semester-hours

* INTEGRATION 551. *Principles and Techniques of Guidance*

Topics included in this course cover: philosophy of guidance, history of the guidance movement, the need for guidance presented by children and adolescents. The methods of gathering useful data are studied, and school records, exploratory activities, tests, inventories, the case study approach, occupational information, and occupational data are treated as well as general methods of guidance with special stress on interviewing and counseling of students.

Credit: 2 semester-hours

* INTEGRATION 552. *The Junior College Curriculum*

This course considers admission requirements, required and elective courses, course contents, and supplementary extra-curricular and guidance activities of the junior college. As a background for a consideration of the principles underlying junior college curricula, there is a brief treatment of the beginnings, aims and functions, administrative organizations, and general trends of American junior colleges.

Credit: 2 semester-hours

INTEGRATION 553. *Core-Curriculum and Life-Adjustment Programs in High Schools*

This course concerns two leading educational developments of the last decade after a discussion of their philosophy and historical antecedents. The most significant school programs already adopted to put these developments into practice are presented in detail.

Credit: 2 semester-hours

INTEGRATION 554A and 554B. *Psychology and Education of Exceptional Children*

This course surveys current practices and problems in the education of children with physical, mental, and emotional handicaps, and of gifted children. It is designed for teachers, counselors, supervisors, and administrators who may work with one or more such children or who may wish to prepare for school and community leadership in developing facilities for exceptional children.

Credit: 2 semester-hours each

INTEGRATION 556. *Improvement of Reading in the Secondary School*

This course is planned to present a complete picture of the reading process in its general and specialized aspects as it functions in the various subject-matter fields of the secondary school. Problems in reading are examined, and procedures for the development of growth in personality, interests, understandings, insights, critical thinking, tastes, and appreciations are studied through an examination of the results of recent research.

Credit: 2 semester-hours

INTEGRATION 601. *Workshop in Education*

Section A—Organizing and Administering the School

Section B—Supervising Instruction

Section C—Dealing with and Understanding Youth

The workshop course enables the graduate student to devote his time to an educational topic or school problem of current interest to him and to secure the help of the staff, fellow students, and college facilities in pursuing this study. Members of the workshop may meet together to discuss matters of common concern in respect to the current school situation. In addition, the student works independently on his own subject and at times meets with a small group interested in the same area.

In the past, students have worked on topics in such areas as these: problems in administration, guidance programs, extra-curricular activities, school philosophies, problems in supervision, curriculum plan-

ning, and community relations. The success of the workshop depends much upon the student knowing what he wants to accomplish in six weeks, the procedure being flexible enough to support his purposes. He must have his proposed problems for study approved by the Director of the Workshop before he enrolls for the course.

The workshop is offered only in the summer session. It is divided into three sections, as noted above. The student may enroll for four semester hours of credit or for two, the four calling for two periods of scheduled time in the course daily, the two calling for one period of scheduled time in the course. The student taking the course for two credits enrolls for one of the three fields: A—administration, B—supervision, or C—guidance. The student taking it for four credits may do all the work in one of these three fields, or he may enroll for two hours credit in one and two in another.

Credit: 2 or 4 semester-hours.

INTEGRATION 602. *Seminar in Guidance*

This course is designed to provide a laboratory situation for the exploration and study of the present practices with respect to the three major phases of the guidance program. Usually this seminar is given in conjunction with either Vocational (INTEGRATION 535), Educational (INTEGRATION 536), or Social-Moral (INTEGRATION 537) Guidance. The major portion of the time is spent on field trips, in private investigation, and in research.

Prerequisites: INTEGRATION 551, and previously or concurrently the related courses listed above

Credit: 4 semester-hours

INTEGRATION 603. *Principles and Practices of Research*

The purpose of this course is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student selects a problem and begins the research which will be completed the second semester.

Prerequisite: MATHEMATICS 400 or equivalent

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

Most of the following courses are set up to serve graduate students as well as College seniors. To carry graduate credit, the course in question must be approved by the candidate's adviser. In all instances, INTEGRATION 406, INTEGRATION 409, and INTEGRATION 410 will be accepted as work for either of the two graduate degrees in this department. For a more complete description of these courses see the undergraduate catalog.

INTEGRATION 406. *Educational Sociology*

This course deals with the application of sociological principles to educational problems. The school is treated as a part of the community, and the various social forces that affect the school and its administration are considered.

Credit: 2 semester-hours

INTEGRATION 407A. *Television in Education Workshop: Programming and Production*

This is a laboratory course designed to develop the techniques, methods, standards, procedures, and criteria pertaining to the special place of television in education. Through the utilization of studio equipment together with the resources of all the academic departments of the college, student potentialities, campus life, and the community, students receive experience in planning, developing, and producing, television programs of educational value. Actual training is given in the use of standard television equipment on campus, and field trips are made to local television laboratories and studios.

Credit: 2 semester-hours

INTEGRATION 407B. *Television in Education Workshop: Classroom Utilization*

This course is designed to give training in the following areas of television education: types of programs best suited for classroom use; practical applications of programs emanating from commercial stations; various subject areas in which television might be used such as language, science, art, social studies, etc.; script writing; co-ordination of program and school schedules; and the possible use of educational television stations and how they best serve surrounding communities. Students are also introduced to the operation of both sending and receiving television equipment so that they may understand program possibilities and limitations.

Credit: 2 semester-hours

INTEGRATION 408. *Selection and Utilization of Audio-Visual Materials*

Sources, selection, and evaluation of audio-visual aids are studied in this course. Techniques in developing individual reference catalogs of audio-visual aids are stressed.

Credit: 2 semester-hours

INTEGRATION 409. *Radio and Sound Equipment in the Classroom*

This course trains teachers and school executives in the use of radio programs, amplifying systems, recording equipment, and record players. Actual practice is given in the use of these educational aids. Problems of script-writing, microphone and recording techniques, and program directing are considered.

Credit: 2 semester-hours

INTEGRATION 410. *Teaching Materials Workshop*

This course is for those persons who wish to study advanced problems in the utilization and administration of audio-visual materials. Individual research is stressed, and there is an opportunity to work out individual projects.

Credit: 2 semester-hours

INTEGRATION 411. *Educational Motion-Pictures Workshop*

This course includes various phases of the planning and production of educational motion pictures. Students receive actual experience in scenario writing, costume research, set designing, lighting, photography, editing, and sound recording. During the course an educational film is produced as a class project.

Credit: 2 semester-hours

INTEGRATION 420A and 420B. *The Community Centered School*

This course deals with the development and functions of the school as a community resource. Students assemble and interpret data relating to actual school and neighborhood situations. Consideration is given to the social framework in which the school operates; racial and national minorities; intercultural education; truancy and delinquency; and the discovery and utilization of community resources. The use of school personnel and facilities to deal with racial problems is treated in light of the data assembled.

Credit: 4 semester-hours

INTEGRATION 421A and 421B. *Leadership of Activities and Services in Community Education*

This course is designed to prepare teachers and others to give leadership to community-education activities. Starting with the assumption that the school should serve as a community center, members of the course proceed to learn about the various activities and programs that can be initiated and carried on by the school. Consideration is given to programming, utilization of space and personnel, and care of equipment. Techniques for organizing and directing special programs such as scouting, folk dancing, crafts, field trips, production of films, forums and debates, etc., are included.

Credit: 4 semester-hours

INTEGRATION 422A and 422B. *The Organization, Administration, and Supervision of Programs in Community Education*

This is a workshop type of course which emphasizes the integration of school, social, recreational, and adult education programs. The course presents a survey of current trends in community education as adopted and implemented by boards of education throughout the country. Principles, policies, practices, and problems related to the administration and supervision of community-education programs are surveyed. The following types of programs are considered: summer playgrounds, day camps, after-school centers, evening centers, youth and adult recreation centers.

Credit: 4 semester-hours

INTEGRATION 430. *Techniques for Improving Reading Abilities*

This course deals with the diagnosis and remedial treatment of difficulties in reading. A study is made of the basic principles underlying desirable reading experiences and their application in guiding children to success in learning to read adequately.

Credit: 2 semester-hours

INTEGRATION 440. *Camping and Outdoor Education*

The purpose of this course is to familiarize the students with camping and outdoor education as educational methods utilized by the schools of America. The aims and methods of camping are studied, and consideration is given to the communities that have active camping and outdoor education programs in operation.

When given through the Part-Time Division of the College, a week-end experience at the New Jersey State School of Conservation in the Stokes State Forest is required for credit in this course.

Credit: 2 semester-hours

INTEGRATION 441. *Conservation Education*

This course is designed to give teachers and prospective teachers a background for organizing and teaching conservation on various grade levels. The need for conservation, the various kinds of natural resources, and some of the modern methods for using and renewing these resources are considered. Field trips, laboratory experiences, visual aids, printed materials, and visiting specialists combine to make this a useful introductory course for all teachers.

Credit: 2 semester-hours

INTEGRATION 442. *Practicum in Camp Leadership*

In this course the student has an opportunity to learn the techniques of camp leadership through practical experience, guided group study, and discussion. The practical experience comes through serving as a camp counselor in an actual camp situation.

Credit: 2 semester-hours

INTEGRATION 444. *Practicum in Conservation Education*

This course is designed to provide teachers and supervisors with a background of experience and knowledge which will enable them to organize and to conduct conservation education programs in their own communities. Using an extensive library of conservation educational material, students formulate teaching units, lists of teaching aids, and projects suitable for use in their own communities. Participation in conservation projects with the children in the demonstration camp furnishes a practical background for research and discussion.

Prerequisite: INTEGRATION 441, *Conservation Education*, or SCIENCE 412, *Field Studies in Science: Biological*, or SCIENCE 413, *Field Studies in Science: Physical*, or the equivalent

Credit: 2 semester-hours

INTEGRATION 450. *Psychological Foundations of Personality*

This course is concerned with the physical, mental, and cultural bases underlying the formation of the personality of the individual. Emphasis is placed upon the implications for the teacher in developing understanding of the formation and measurement of personality.

Credit: 2 semester-hours

INTEGRATION E460. *Public School Program of Studies*

This title is given to a group of courses designed to meet requests from public school systems desiring help in curriculum reconstruction. Each of the parts of this general course will be given on a cooperative inter-college basis, and taught by specialists in the various fields selected from the faculties of the cooperating State Teachers Colleges. Certificates of credit will be issued by the college sponsoring the work.

- Part I. 460A—Principles of Curriculum Revision
- Part II. 460B—Workshop in Curriculum Revision
- Part III. 460C—Organization and Evaluation of Curricula
- Part IV. 460D—The Social Studies Program of Studies
- Part V. 460E—The Language Arts Program of Studies
- Part VI. 460F—The Science Program of Studies
- Part VII. 460G—Workshop in Materials and Methods of Science Education
- Part VIII. 460H—The Mathematics Program of Studies

These cooperative inter-college courses are provided only when the requests from the public school authorities of the county, municipality, or community are such as to require their use. No undergraduate may elect this course unless he is actively engaged in teaching. Not more than six semester-hours in these courses may apply on a graduate degree at the New Jersey State Teachers College at Montclair.

Credit for each part: 2 semester-hours

INTEGRATION E460I. *Public School Program of Studies*

- Part IX. Testing and Evaluation in Instructional Program

This course is a part of a group of courses designed to meet requests from public school systems desiring help in curriculum reconstruction and in up-grading of teacher personnel. The course is given as a workshop dealing with testing, test construction, evaluation of students, and evaluation of test results on teacher-prepared tests. Practical classroom tests and actual teaching situations are considered.

Credit: 2 semester-hours

INTEGRATION 461. *The Junior High School Curriculum*

Recent trends in the development of the junior high school curriculum and the relation of the curriculum to the aims, function, and organization of the junior high school are the topics covered in this course. Curriculum patterns in representative junior high schools are studied and evaluated. An opportunity is given to each student to develop units of work for junior high school subjects in the major of his choice.

Credit: 2 semester-hours

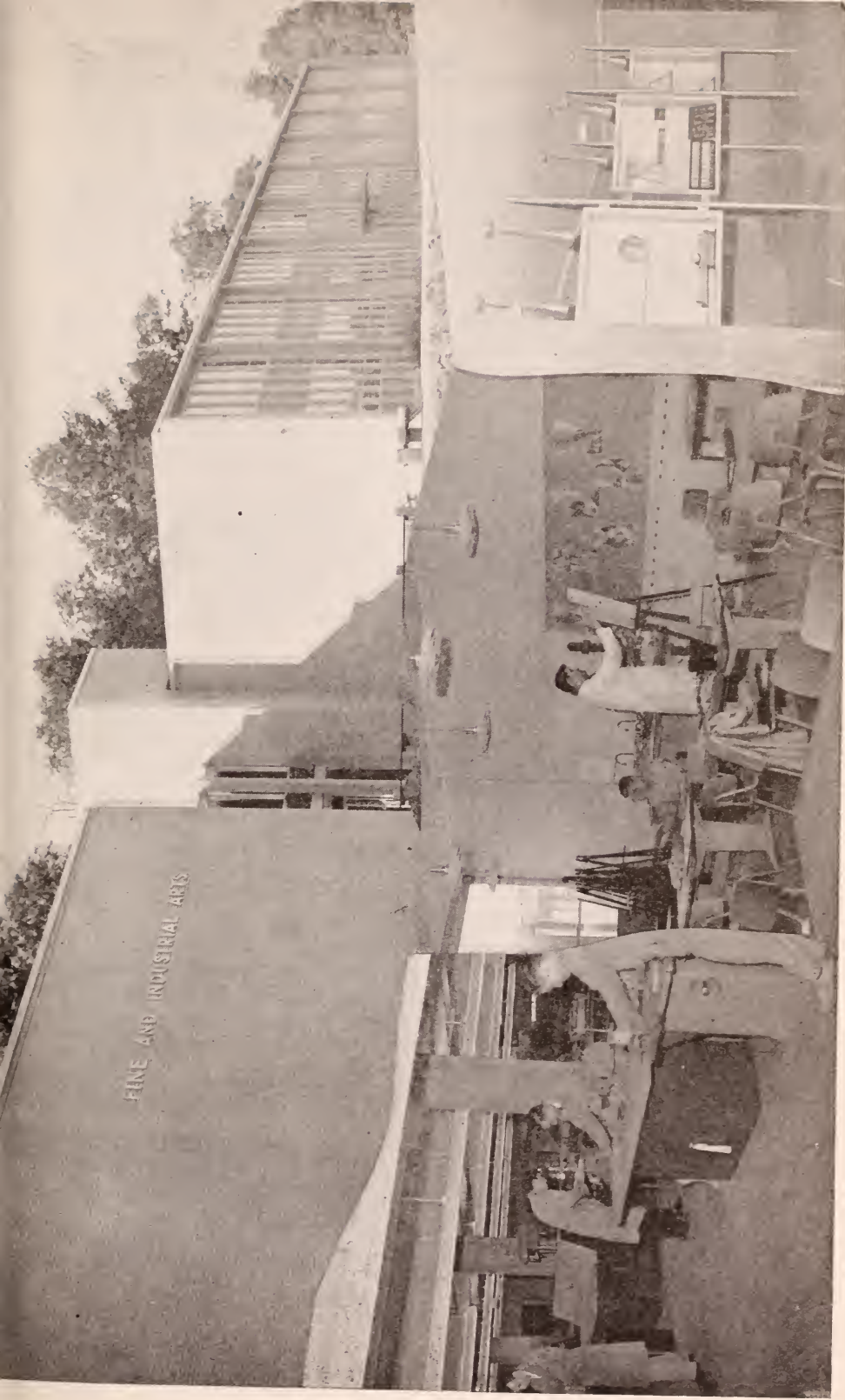
INTEGRATION 480. *Field Science for Elementary Teachers*

Working in a natural setting, rather than an artificial laboratory, this course stresses firsthand experience with natural phenomena and suggests what can be done to convey an understanding of these things to the elementary-school student. In developing an understanding of natural resources consideration is given to such areas as rocks and minerals, plant and animal life, astronomy, weather, and all outdoor phenomena, both physical and biological. If desired, collections are made under supervision, and some latitude is provided for individual specialization in some phase of field science. The student needs no formal scientific background for this course. Methods of teaching on the elementary-school level as well as subject-matter content are included. Simple demonstrations, experiments, collections, acquisition of free and inexpensive materials, reference publications, and the most recent methods and trends in field-trip procedure are considered.

Credit: 2 semester-hours

ELEMENTARY EDUCATION COURSES

Although the New Jersey State Teachers College at Montclair is engaged primarily in preparing secondary school teachers, during the present shortage of teachers in the elementary schools it was deemed expedient to offer courses in the field of elementary education for the undergraduates of the college leading toward certification to teach in these subjects. Under certain conditions courses in elementary education may be used for graduate credit. Students should check with their advisers in this connection.



New Majors and New Facilities are Provided in Finley Hall

DEPARTMENT OF MATHEMATICS

The graduate courses in mathematics are designed to meet the needs of teachers in service. They offer the opportunity for further study in pure mathematics, in the applications of mathematics to related fields, and for the study of current problems in the teaching and supervision of mathematics.

A candidate for the Master of Arts degree in mathematics should consult the Chairman of the Mathematics Department before matriculation, since the choice of graduate courses should be adjusted to the preparation acquired in undergraduate work. Of the thirty-two graduate credits required for the degree, eighteen or more (the exact number depends upon the candidate's previous preparation) must be taken in the Department of Mathematics.

A candidate who does not have a certificate to teach mathematics must have thirty undergraduate credits in college mathematics as a prerequisite for graduate work. In any case, a candidate who wishes to matriculate for the A.M. degree in mathematics must have had courses at least through the differential and integral calculus.

REQUIREMENTS IN MATHEMATICS DEPARTMENT

- I. At least 18 semester-hours of graduate courses in mathematics are required. These courses must bear catalog numbers equal to or greater than 500, unless permission is granted the candidate by the Chairman of the Mathematics Department to take courses with numbers less than 500 for graduate credit.

The graduate courses in mathematics are grouped into the following three divisions:

- A. Pure Mathematics

These are courses in advanced mathematics which form an extension of the required work for a mathematics major. They include MATHEMATICS 503, 504, 511A, 511B, 512, 515, 516A, 516B, 517, 521, 523, 524, 531, and 532.

- B. Applied Mathematics

These courses emphasize the applications of mathematics to related fields of work. They give an extension and generalization of secondary mathematics together with certain phases of college mathematics which are employed in solving problems arising in the physical, biological, and social sciences. The principal aim is to supply background information that may be used to enrich the teaching of mathematics. These courses are: MATHEMATICS 505, 509A, 509B, 509C, 510A, 510B, 510C, 528, and 601.

C. Teaching and Supervision of Mathematics

The principal items considered are the current problems arising in the teaching and supervision of mathematics, the organization and construction of course syllabi, administrative problems, and the use of current mathematical literature. The chief purpose is to enable the teacher to select more suitable teaching material, to improve teaching techniques, and to use effectively various types of teaching aids. These courses are: MATHEMATICS 501A, 501B, 501C, 506, 507, 529, 530, and 540.

II. *Requirements in the Integration Department*

- A. INTEGRATION 503, *Methods and Instruments of Research*, for two semester-hours is required of all students.
- B. In addition, four semester-hours must be selected from these courses: INTEGRATION 408, 409, 500A, 500B, 500C, 504A, 505, 521A, 521B, 535, 536, 537, 538, 551, 553.

III. *Elective Courses*

A sufficient number of graduate courses having 500 or 600 numbers must be taken to make up a total of thirty-two semester-hours.

In lieu of four of the required thirty-two credits, the candidate may write a thesis giving the results of some study in the field of mathematics or its teaching. This study must be made after consultation with the Chairman of the Mathematics Department and under the sponsorship of a member of the mathematics faculty. Plans should be made to have such a study in its final form and approved by the Mathematics Department by April 1st of the year in which the degree is anticipated. The preparation of such a dissertation does not relieve the candidate of any of the required credits in mathematics.

Special permission must be obtained from the Chairman of the Department to receive credit for courses with numbers under 500.

IV. *Final Examination*

A final examination in mathematics is given all candidates prior to the conferment of the degree. This examination is general in nature and is designed to test the candidate's maturity of thought in mathematics and in the teaching of mathematics.

GRADUATE COURSES

MATHEMATICS 501A. *Administration and Supervision of Mathematics, Part I*

This course is concerned with the problems met in organizing and supervising the teaching of mathematics. The topics considered are the functions and qualifications of the supervisor of mathematics, in-service training of teachers, demonstration lessons, professional attitude and preparation of teachers, department meetings, selection of texts, current problems, research, and the basis for determining objectives. Some attention is paid to efficient methods of securing mastery of skills, the development of power in problem solving, and the organization of testing programs.

Credit: 2 semester-hours

MATHEMATICS 501B. *Administration and Supervision of Mathematics, Part II*

Particular emphasis is placed on such current problems of the high school as the organization of a four-year course in general mathematics, revision of the present college preparatory course, proposals for revision of, or changed emphasis in, the course in plane geometry, as well as suggestions for including some analytic geometry and calculus in the senior high school. Reports of various commissions on secondary mathematics are considered.

Credit: 2 semester-hours

MATHEMATICS 501C. *The Teaching of Advanced Secondary School Mathematics*

This course presents the best modern practices in teaching advanced algebra, trigonometry, solid geometry, and analysis in the last two years of the senior high school. Topics include: introducing trigonometry, teaching applications of trigonometry, variations in the sequence of topics, recent trends in the curriculum, the aims of teaching solid geometry, the elimination of certain subject matter and proofs, the use of algebra and trigonometry in solid geometry, making algebra *thinking* rather than *manipulation*, applications of advanced algebra, and the use of the function concept in unifying the mathematical knowledge of the student. A study is made of outstanding experiments in teaching these subjects and methods of adapting the material to the abilities and interests of the students.

Credit: 2 semester-hours

MATHEMATICS 503. *Foundations of Algebra*

Careful consideration is given to the fundamental concepts and postulates which form the foundation of algebra. Upon this basis the development of our number system is traced through the application of algebraic operations. Algebraic analysis supplies the criteria for the possibility of geometric constructions. Also a brief survey is given of the general theory and use of rational integral functions.

Credit: 2 semester-hours

MATHEMATICS 504. *Modern Algebra*

The modern algebraic theories of groups, rings, and number fields are studied. Particular attention is given to polynomials over a field, matrices and determinants, and the properties of linear independence and linear dependence.

Credit: 2 semester-hours

MATHEMATICS 505. *Consumer Mathematics*

A survey is made of consumer problems which lend themselves to mathematical treatment. Attention is given to the placement and the techniques of teaching such material in the intermediate grades and in the junior high school. The principal topics included are: the cost of supporting a family, the cost of owning or renting a home, problems of insurance, annuities, social security, investments, the quality and cost of consumer goods, seasonal trends, business cycles, and indices of business activity.

Credit: 2 semester-hours

MATHEMATICS 506. *Current Research in Secondary Mathematics*

Trends in the teaching of secondary mathematics (grades 7-14) and current trends in general education which affect the teaching of secondary mathematics are carefully studied. The influence of these trends on the syllabi and textbooks in secondary mathematics during the last several decades is systematically traced. A critical perusal of the literature in this field is required to reach worth-while recommendations for the improvement of teaching secondary mathematics.

Credit: 2 semester-hours

MATHEMATICS 507. *The Teaching of General Mathematics*

Reports, recommendations, and mathematics programs for high school students who have other objectives than a college preparation, are studied. Topics included are: characteristics of non-academic students, mathematics for intelligent citizenship, vocational mathe-

matics, remedial arithmetic, laboratory mathematics, source materials, classroom teaching techniques, and integration with other subject-matter areas as in the core curriculum.

Credit: 2 semester-hours

MATHEMATICS 509A. *A Critical Interpretation of Mathematics in the Senior High School, Part I*

An opportunity is here offered for an investigation and interpretation of the algebra and geometry of the secondary school. The meaning and use of secondary mathematics are stressed, rather than the methods of teaching. Among the topics discussed are: algebra as a thought process and not a mechanical operation, types of thinking in algebra and geometry, fundamental laws of arithmetic, algebra as generalized arithmetic, geometrical interpretation of algebra, the function concept in algebra and geometry, the changing scope and subject-matter of Euclidean geometry, limits and incommensurables, and integration (i. e., correlation and fusion) of all secondary mathematics.

Credit: 2 semester-hours

MATHEMATICS 509B. *A Critical Interpretation of Mathematics in the Senior High School, Part II*

Among the topics discussed are: the development and use of the limit concept in secondary mathematics; the introduction of analytic geometry and calculus; the geometry of space; permutations and combinations; the elements of probability and statistics. The subject matter is adapted to the secondary level and treated from the professional viewpoint.

Credit: 2 semester-hours

MATHEMATICS 509C. *A Critical Interpretation of Mathematics in the Junior High School*

The aim of this course is to give teachers a deeper insight into the subject-matter usually taught in the seventh, eighth, and ninth grades. Among the topics considered are: the nature of graphs, an intuitive and experimental approach in geometry, the arithmetic and algebra for social use and interpretation, approximate measures and mensuration, and integration with other subject fields. The course is open to all junior and senior high school teachers and those elementary school teachers who have had two years of high school mathematics.

Credit: 2 semester-hours

MATHEMATICS 510A. *Applications of Mathematics: Social Studies*

Fundamental topics common to both mathematics and social studies are carefully examined including ways and means of integrating these topics in the secondary school curriculum. They include: measurement in social science, presentation of social data, use of index numbers, distribution of wealth and income, utilities, use of charts and graphs, theory of investment, probability, insurance, and annuities.

Credit: 2 semester-hours

MATHEMATICS 510B. *Applications of Mathematics: Science, Art, and Music*

This course surveys the mathematics of optics, electricity, meteorology, biology, chemistry, physics, music, and similar topics. Various physical and biological laws including the laws of growth, especially the applications of certain periodic functions, are studied. The chief purpose is to supply the teacher with background material that may be used to enrich the teaching of mathematics and to encourage further study of these allied fields.

Credit: 2 semester-hours

MATHEMATICS 510C. *Applications of Mathematics: Geography, Astronomy, and Navigation*

An opportunity is here offered for mathematics teachers to become acquainted with the mathematics of mapping, astronomy, and navigation closely related to the algebra, solid geometry, and trigonometry taught in high school. A study of spherical geometry and trigonometry leads to topics in mathematical astronomy and geography and to navigation. The discussion includes such topics as: latitude and longitude; time and the calendar; map projections; the making of star maps; sizes and distances of the sun, moon, planets, and stars; weighing the earth and moon; and relativity.

Credit: 2 semester-hours

MATHEMATICS 511A. *Foundations of Geometry*

A careful study is made of the fundamental postulates and basic principles underlying Euclidean synthetic and projective geometries. Past and present trends in this field and the resulting modifications are considered in connection with the historical background of each. Finally, the development of the subject is briefly traced through certain fundamental groups of associated theorems and their generalizations.

Credit: 2 semester-hours

MATHEMATICS 511B. *Non-Euclidean Geometry*

The development of Hyperbolic-Non-Euclidean and of Elliptic Non-Euclidean geometry is carefully traced. A brief survey of the historical development of each is given. This course is designed for teachers and students of mathematics who desire a better perspective of the field of geometry.

Credit: 2 semester-hours

MATHEMATICS 512. *Methods of Approximation*

This course deals with the determination of functions from observed experimental data. Among the topics considered are: finite differences, symbolic operators, differencing, interpolation formulae, the Gamma function, and the Euler-MacLaurin formula. The course is designed to show the nature of mathematics as an applied science.

Credit: 2 semester-hours

MATHEMATICS 515. *Differential Equations*

This course is a continuation of the calculus considered from a new view-point. Various applications of differential equations and their standard methods of solution are fully treated in this course. Among the topics included are: linear differential equations of the first degree and of the first and higher orders, linear equations of the n th order with constant coefficients, linear equations of the second order, exact and total differential equations, simultaneous equations, numerical approximation, and partial differential equations.

Credit: 2 semester-hours

MATHEMATICS 516A. *The Theory of Functions of Complex Variables*

The fundamental properties of complex numbers and the elementary properties of functions of complex variables are developed. These include the properties of mapping, line integrals, Cauchy-Goursat Theorem, and conformal mapping. The practical applications of the theory are stressed by the use of illustrative examples.

Credit: 2 semester-hours

MATHEMATICS 516B. *The Theory of Functions of Real Variables*

The fundamental properties of real numbers and the elementary properties of functions of real variables are systematically developed. Among the topics considered are: continuity, differentiability, integrability, algebraic and transcendental functions, hyperbolic functions, and infinite series.

Credit: 2 semester-hours

MATHEMATICS 517. *The Theory of Numbers*

This course offers a systematic treatment of certain fundamental properties of numbers. It includes such topics as: properties of integers; prime numbers; composite numbers; factorization; relatively prime numbers; properties of congruences and their solutions; fundamental theorems of Fermat, Euler, Wilson, Gauss, etc.; primitive roots of a congruence; quadratic residues; and certain types of Diophantine equations.

Credit: 2 semester-hours

MATHEMATICS 521. *Analytical Mechanics*

The fundamental basic principles of this course are Newton's laws of motion, whose applications and consequences are carefully considered in the study of such topics as: the composition and resolution of forces, the statics of a particle and of a rigid body, forces acting upon a body, friction, straight line motion, curvi-linear motion, work and energy, moment of inertia, etc. The need and usefulness of mathematics for the explanation of physical phenomena are clearly shown.

Credit: 2 semester-hours

MATHEMATICS 523. *The Theory of Probability*

In this course the applications of the theory of probability to life insurance, statistics, mechanics, and genetics are stressed. Special attention is paid to the implications of probability in secondary school mathematics, and to the teaching of probability in the senior high school. The ideas of choice in combinations and permutations are developed. The intuitive ideas and the classic paradoxes in the historical development of the theory are also considered. Additional topics considered are: continuous probability, the normal probability curve, and geometric probability. It is assumed that students taking this course have an understanding of college algebra and the elementary ideas of calculus.

Credit: 2 semester-hours

MATHEMATICS 524. *Statistical Inference and Sampling Theory*

In this course the student considers the planning and execution of a statistical study. Among the topics considered are: moments and moment generating functions; binomial, Poisson, and normal distributions; the general theory of sampling; student's distribution; chi-square distribution; analysis of variance and co-variance; statistical control; and the design of experiments. The development of statistical reasoning is an important aim of the course. Applications are given to industrial, scientific, and social data.

Prerequisite: MATHEMATICS 408

Credit: 2 semester-hours

MATHEMATICS 528. *Mathematics Materials for Student Activities and Club Programs*

This course analyzes some of the large amount of material available for individual and club activities in mathematics. Mathematical recreation, plays, topics for essays or club programs, and popular books on mathematics are studied. The material considered varies from elementary arithmetical recreations for the elementary school to topics involving advanced mathematical ideas. Topics considered are: recreations; arithmetical, geometrical, and logical problems in arrangement, polyhedrons and crystallography, classical problems of antiquity, cryptography, magic squares, topological and unicursal problems.

Credit: 2 semester-hours

MATHEMATICS 529. *Curriculum Construction in Mathematics*

This course is conducted as a workshop or seminar in constructing curricula in mathematics. The chief objective of the course is cooperation with those communities which are planning changes in their courses of study. Among the topics considered are: the selection of aims, a study of recent courses of study in mathematics, the reports of various commissions, and other research pertinent to the questions at issue.

Credit: 2 semester-hours

MATHEMATICS 530. *Mathematical Materials and their Applications in the Teaching of Mathematics*

In this course the student considers the adaptation and use of multisensory materials to motivate and improve the teaching of high school mathematics. Particular attention is given: to the equipment needed for the modern mathematics laboratory and how it may be used effectively; to plans for the extra-curricular activities in mathematics, such as mathematics clubs and assembly programs; to such visual aids as pictures, lantern slides, motion pictures, and bulletin board exhibits; and to the books, periodicals, and pamphlets needed for the school and the teacher's library.

Credit: 2 semester-hours

MATHEMATICS 531. *Survey of Higher Mathematics*

The principal aim of this course is to give the student some insight into the nature and content of various fields of higher mathematics. This includes a discussion of the basic structure and framework of the following branches of higher mathematics: foundations of logic,

higher algebra and algebraic theories, theory of groups, synthetic and analytic projective geometries, differential geometry, N-dimensional geometry, topology, vector analysis, and calculus of variations.

Credit: 2 semester-hours

MATHEMATICS 532. *Projective Geometry*

The methods of synthetic and analytic projective geometry are compared and used to emphasize the fundamental concepts of Euclidean geometry. Emphasis is placed upon the dependence of many common properties and theorems of Euclidean geometry upon the properties of lines, parallelism, perpendicularity, similarity of figures, and the definition of distance. Other topics considered include: the principle of duality, perspective and projective correspondences, the theorems of Desargues and Pascal, nets of rationality, homogeneous and nonhomogeneous coordinates, and conics.

Credit: 2 semester-hours

MATHEMATICS 540. *Research Seminar in Mathematics*

This seminar is designed primarily for those students who select some problem of interest in either the subject matter or the teaching of mathematics for intensive study and research. A written report is required of each student.

The course is open to all students who have had at least eight semester-hours of graduate work in mathematics. It is required of all students who wish to write a master's dissertation in this field.

Credit: 2 semester-hours

MATHEMATICS 601. *Workshop: Current Problems in the Mathematics Field*

This course is conducted as a workshop for the solution of such actual problems in the teaching of mathematics as: courses in mathematics for the general and for the specializing student; integration of mathematics with other courses; revision of subject-matter in particular fields, such as in plane geometry; and research problems in specific units of work. The class meets for conferences, reports, and lectures. Individual conferences between the instructor or consultant and each individual member of the class are held by appointment.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

MATHEMATICS 402. *Applications of Mathematics*

This course deals with the use of instruments in precision measurements to supply adequate information and teaching techniques for various phases of junior and senior high school mathematics. It includes the use of the abacus, the slide rule, hypsometer, transit, sextant, planimeter, plane table and scale drawing, etc. The student is required to make some of the simpler instruments and demonstrate their use for classroom instruction.

Credit: 3 semester-hours

MATHEMATICS 404. *Readings and Lectures in Mathematics*

Lectures are given upon advanced topics in mathematics and on those phases of mathematics which are finding new applications, especially as they are related to the secondary field.

Credit: 2 semester-hours

MATHEMATICS 405. *History of Mathematics*

As a study of elementary mathematics emphasis is placed on the historical growth of arithmetic, algebra, and geometry. The development of fundamental concepts and operations involving the use of symbols is studied with emphasis placed upon noteworthy contributions and the influence of leading mathematicians. A by-product is the motivating effect of historical information on the teaching and learning of mathematics.

Credit: 2 semester-hours

MATHEMATICS 406. *Solid Analytic Geometry*

A review and extension of the theory of determinants, a study of lines and planes in space, of space coordinates, transformation of coordinates, loci in space, the sphere, and of quadric surfaces are considered in this course. The study of the general quadratic equation in three variables, invariance under motion, and the classification of numerical equations completes the course.

Credit: 2 semester-hours

MATHEMATICS 407. *Advanced Calculus*

After a brief review of the fundamental concepts of elementary calculus, more advanced topics are considered which include the theory of limits, continuity, the general theorem of mean value, infinite series, partial differentiation, and multiple integrals.

Credit: 2 semester-hours

MATHEMATICS 408. *An Introduction to Mathematical Statistics*

This first course covers the usual topics in statistics, using calculus as a major tool in the derivation of formulas. Topics included are: types of data and types of measurement; attributes and variables; graphical representation; measures of central tendency and dispersion; moments; binomial, Poisson, and normal distributions; linear regression and correlation; elements of sampling theory and statistical inference. This course is required of mathematics majors in lieu of MATHEMATICS 400.

Credit: 3 semester-hours

MATHEMATICS 409. *Introduction to Contemporary Mathematics*

The aim of this course is to develop the point of view of contemporary mathematics and to consider its potential influence upon secondary school mathematics. Special consideration is given to topics in professional literature for possible inclusion in secondary school mathematics. Such topics include sets, Boolean algebra, a modern concept of variable and function, a detailed study of sentences and statements, the use of symbolism and patterns in mathematics, linear programming, and the application of new mathematical techniques in the social sciences.

Credit: 2 semester-hours

MATHEMATICS 410. *Mathematics of Finance*

This course introduces the student to the elementary theory of simple and compound interest and leads to the solution of practical problems in annuities, sinking funds, amortization, depreciation, stocks and bonds, installment buying, and savings and loan associations.

Credit: 2 semester-hours

MATHEMATICS 412. *Modern Geometry*

This course presents a treatment of modern synthetic geometry on an advanced level. It is based on a fundamental framework of plane geometry and maturity of teaching in the field of mathematics. Topics treated are loci and geometric constructions; fundamental theorems of Ceva, Menelaus, Stewart, Euler, Ptolemy, etc.; homothetic figures, the harmonic range, noteworthy lines and points, systems of circles, and inversion.

This course is not open for credit to students who have received credit for Mathematics 301.

Credit: 4 semester-hours

DEPARTMENT OF SCIENCE

The teacher of secondary school science is faced constantly with the problem of maintaining his professional competence with respect to recent advances in the fields of science and science education.

The past two decades have brought forth an astonishing array of new discoveries in biology, chemistry, physics, and other branches of science. Entirely new scientific points of view have to be considered by a teacher who wishes to keep his classroom practices up to date with the most recent findings as reported in current newspapers, magazines, and books.

The unusual growth of enrollment in secondary schools has brought the science teacher numerous difficult problems of science education which require a more scholarly background than has been necessary in previous decades. It is clear that the demands to be made upon the science teacher in the near future will greatly exceed those of any previous decade. A thorough knowledge of science and secondary education is necessary to professional success and promotion.

Other factors operate to multiply the problems of high school science teachers. The rapid growth of work in science in elementary schools and the extraordinary growth of junior high school science preparation foreshadow a fundamental reorganization of the senior high school science program. This work is now well under way in many sections of the country. The courses offered here are designed to help the science teacher meet these changing needs.

Prior to matriculation in the Science Department for the Master of Arts degree the student should complete a subject matter background of thirty semester-hours of college science distributed in the areas of biology, chemistry, and physics. Deficiencies must be made up prior to the conferment of the A. M. degree. A minimum of eighteen semester-hours of graduate credit work in science is required. SCIENCE 401 will not be accepted toward meeting this eighteen semester-hour departmental requirement. The student's work program is prepared in cooperation with the science adviser. Any changes in the student's work program are made only with the written approval of the science adviser.

COURSE REQUIREMENTS FOR THE A. M. DEGREE IN SCIENCE

I. *Integration Requirements*

Each student must take INTEGRATION 503, *Methods and Instruments of Research*, and four additional semester-hours in Integration courses.

II. *Science Requirements*

A. The candidate must complete three four semester-hour courses from among the following :

Biology 402, 407, 408, 409, 509

Chemistry 405, 406, 407, 408, 411, 412, 508, 509, 510

Physics 402, 405, 406, 407, 408, 409, 411, 510, 512

Science 405, 410

12 semester-hours

B. The candidate may elect two to three semester-hours from among the following :

Biology 501, Chemistry 501, Science 401D

C. The candidate may elect up to six semester-hours from among the following :

Biology 412, 413, 414, 508

Chemistry 413

Physics 513

Science 411, 412, 413, 414, 415, 418

D. The candidate must take SCIENCE 505, *Science Seminar for Junior and Senior High Schools*.

2 semester-hours

E. With the consent of his adviser, the candidate may elect from among Science courses, Integration courses, or other courses on the 400-500 level.

Maximum possible for E—6 semester-hours

BIOLOGY

GRADUATE COURSES

BIOLOGY 501. *The Teaching of Biology in Secondary Schools*

This is a seminar and research course designed to give opportunity for study of the best methods and practices being used in the teaching of secondary school biology. Major topics of discussion are: aims of secondary school biology, course content, functions of textbooks, testing, laboratory exercises and demonstrations, and the collection and use of suitable and available laboratory materials. A study is made of recent research studies in the field of biology teaching.

Prerequisite: 16 semester-hours of work in biology

Credit: 3 semester-hours

BIOLOGY 508. *Social Applications of Biology*

This field-study course offers to teachers of science an opportunity to gain first-hand knowledge of the uses made of biological principles in industry and in modern laboratories. Field trips are designed to cover such varied interests as public health and hospital routine laboratories, medical botanical research laboratories, and the inspection of model industries developing biological products.

Prerequisite: 12 semester-hours of work in biology

Credit: 4 semester-hours

BIOLOGY 509. *Field Studies of Flowering Plants*

The emphasis of this course is placed upon the methods of identification of higher plants and the ecological factors affecting the growth and development of these plants. Plants in their winter conditions are considered first. As the season progresses, the emphasis changes from the identification of woody to herbaceous forms. Plant communities of various types are observed, and the factors influencing their development are discussed. Field trips are taken to such typical habitats as the Pine Barrens, Troy Meadows, and others.

Prerequisite: General botany

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

BIOLOGY 402. *Mammalian Anatomy and Histology*

A study is made of the gross structure of a typical mammal and of the structural peculiarities of its various tissues. Both the anatomical studies and histological studies included in this course are pursued with functional significance strongly emphasized. This course prepares the student for the study of human physiology.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 407. *Comparative Embryology*

A study is made of the stages in development and factors influencing the development of different animal types, particularly the vertebrates. Students in this course follow carefully the development of the chick through the earlier stages.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 408. *Biological Technique*

This course is designed to furnish the prospective teacher of biology with the technical details necessary to enable him as a secondary school teacher to handle successfully biological materials and experiments and demonstrations in which these materials are employed.

Prerequisites: 8 semester-hours of work in zoology and 4 semester-hours of work in botany

Credit: 4 semester-hours

BIOLOGY 409. *Human Physiology*

A study is made of normal and abnormal physiology based on previous study of mammalian anatomy and histology. In addition to an analysis of the part played by organs and tissues in carrying out the essential functions of the body, special attention is given to problems of hygiene and sanitation.

Prerequisite: A course in vertebrate anatomy or BIOLOGY 402

Credit: 4 semester-hours

BIOLOGY 412. *Genetics*

This course considers the scientific basis of the gene concept and its support in experiment from Mendel's work to the present allegations of the Lysenko school. Documents of some of the milestones

in the history of the science are studied, and the adherence to scientific method is carefully noted. The wide uses of the science in plant and animal improvement and the discoveries related to man's heredity make an integral part of the study. The course helps the teacher of biology or social studies to discriminate between what is scientifically known and what is political philosophy in genetics. Laboratory exercises supplement lectures and discussion.

Prerequisite: A course in college biology

Credit: 2 semester-hours

BIOLOGY 413. *Economic Botany*

The consideration of the importance of plants and plant life to the world in general and to man in particular is the principal aim of this course. The economic importance of bacteria, fungi, and other lower plants is considered as well as that of the seed plants.

Prerequisite: One year of general botany

Credit: 2 semester-hours

BIOLOGY 414. *Field Ornithology*

New Jersey is one of the best areas in the East for the study of birds. On the Montclair campus alone, over 130 species have been observed. This course deals primarily with the identification and natural history of birds. A variety of habitats is visited so that one can become acquainted with the habits and requirements of this unusually well-adapted vertebrate type. Migration, methods of attracting and protecting birds, the value of birds, and other problems are also considered.

Prerequisite: A year of biology or the equivalent

Credit: 2 semester-hours

CHEMISTRY

GRADUATE COURSES

CHEMISTRY 501. *The Teaching of Chemistry in Secondary Schools*

This course satisfies the requirements in the teaching of chemistry for the limited secondary certificate. A study is made of the objectives, recent trends, methods of presentation, courses of study, lesson planning, instructional aids, and subject matter of high school chemistry.

Prerequisite: 16 semester-hours in chemistry

Credit: 3 semester-hours

CHEMISTRY 508. *Advanced Organic Chemistry—Biochemistry*

In this course a study is made of the composition of living organisms, their nutritional requirements, their mechanism for promoting and regulating chemical action, and their metabolism of foods. A laboratory study is made of the components of foods, enzyme action, isolation of proteins, etc., blood and urine analysis.

Prerequisites: CHEMISTRY 405 and 406, organic chemistry

Credit: 4 semester-hours

CHEMISTRY 509. *Advanced Inorganic Chemistry*

This course offers opportunity for intensive and systematic study of the elements in the light of the periodic classification. Selected theories and principles of inorganic chemistry and some of their applications are studied in detail. A study is made of types of compounds. Directed use of chemical literature is an important part of this course. Individual experimental work in the laboratory consists chiefly of preparation and purification of inorganic compounds and testing for impurities in the products.

Prerequisite: A course in quantitative analysis

Credit: 4 semester-hours

CHEMISTRY 510. *Food Inspection and Analysis*

A study is made of the composition of commercial food products, the laws governing purity and marketing of foods, methods of analysis of foods and cosmetics, and the judging of foods for quality. Trips are made to food laboratories and food processing plants.

Prerequisites: Organic chemistry and quantitative analysis

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

CHEMISTRY 405. *Organic Chemistry, Part I*

The course covers the chemistry of carbon compounds and gives increased facility and experience in manipulating complicated chemical apparatus. It treats of the role of chemistry in life processes, including the synthesis and adaptation of carbon compounds in industry, in medicine, and in daily living. The first semester's work covers the chemistry of simple chain compounds and includes fats and carbohydrates.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry

Credit: 4 semester-hours

CHEMISTRY 406. *Organic Chemistry, Part II*

The work of this course covers the chemistry of multiple functional chain compounds, the ring compounds, vitamins, hormones, and the application of these compounds in industry, in foods, and in medicine.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry

Credit: 4 semester-hours

CHEMISTRY 407. *Advanced Quantitative Analysis*

This course is adapted to the needs and preparation of students. The student, after consultation with the instructor, may select analyses from the following: general or special types of oxidation-reduction; gravimetric methods; colorimetric methods; use of organic reagents in analyses; electrometric titrations; conductimetric titration; spectrographic methods of analysis; electrodeposition of metals; and special methods of analysis.

Prerequisites: General college physics and one semester of quantitative analysis, or special permission of the instructor

Credit: 4 semester-hours

CHEMISTRY 408A. *Industrial Chemistry, Part I*

The purpose of this course is to enable science teachers to understand the type of chemical industries in the State of New Jersey and the nature of their problems. A survey is made by lectures, reports, and trips to plants of the chemical industries in the State. This section of the course stresses the importance and the characteristics of chemical industries, the various unit operations used by the industries to carry out chemical reactions, the controls used to insure quality, organization for research, and the type of workers employed.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 408B. *Industrial Chemistry, Part II*

This course is a study of the chemical industries of the metropolitan area utilizing the methods outlined in CHEMISTRY 408A. Also, a study is made of the economics of chemical industry, chemistry and industry in general, and the effects of chemical discoveries upon living conditions.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 411. *Physical Chemistry, Part I*

This course, the first half of a year's work in physical chemistry, deals with gases, liquids, crystals, properties of electrolytes, chemical kinetics, thermochemistry, and homogeneous and heterogeneous equilibria.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry, CHEMISTRY 202, analytical chemistry, and PHYSICS 101 and 102, general college physics

Credit: 4 semester-hours

CHEMISTRY 412. *Physical Chemistry, Part II*

This course deals with electrical conductance, electrolytic equilibrium, electromotive force, electrolysis, polarization, colloids, photochemical reactions, atomic structure, molecular structure, and radioactivity.

Prerequisites: CHEMISTRY 101 and 102, general college chemistry, CHEMISTRY 202, analytical chemistry, and PHYSICS 101 and 102, general college physics

Credit: 4 semester-hours

CHEMISTRY 413. *Atomic Structure and Atomic Energy*

This is a lecture course designed to familiarize the student with a modern conception of the structure of matter and to acquaint him with some significant aspects of atomic energy. Some of the topics studied include the following: discoveries leading to knowledge of the structure of the atom; isotopes; nuclear fission; nuclear reactions; chemical versus atomic explosions; the chain-reacting pile; production of plutonium; detection and measurement of nuclear radiation and incendiary effects of atomic explosions; atomic energy for peace-time uses; radioactive isotopes in agricultural, biological, and chemical research; and availability of materials for atomic energy.

Prerequisites: General college chemistry and general college physics, or special permission of the instructor

Credit: 2 semester-hours

PHYSICS

GRADUATE COURSES

PHYSICS 510. *Advanced Problems in Photography*

This course is intended to meet the needs of the camera club teacher and the hobbyist. The course includes negative and positive alterations, toning, printing processes, studio portraits, color photography, and photomicrography. The student is expected to submit prints of exhibition quality for public showing.

Prerequisites: General college physics, general college chemistry, and a first course in photography

Credit: 4 semester-hours

PHYSICS 512. *Modern Physics*

This course is a survey of recent experimental research in physics and of the newer theories concerning nuclear physics and electricity. Such topics as atomic spectra, radioactivity, artificial transmutation of the elements, and cosmic rays are discussed.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 513. *Nuclear Radiation*

A study of the nature of radiations is made. Particular attention is given to radiation measurement technique. The course is concluded with a study of health physics as related to radiation dosages and their effects. Some attention is paid to disposal of radioactive wastes, radiation protection, and safety precautions.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

PHYSICS 402. *Advanced Electricity*

The most important aims and purposes of this course are as follows: (1) to provide a substantial background of training in the fundamental laws and principles governing the generation and use of electricity; (2) to develop skill in manipulating laboratory and demonstration apparatus; and (3) to learn the basic principles of alternating current circuits.

Prerequisites: PHYSICS 101 and 102

Credit: 4 semester-hours

PHYSICS 405. *Light and Optical Instruments*

Topics included for study in the classroom and laboratory are: the propagation of light; emission and absorption of radiant energy; reflection, refraction, polarization; spectrum analysis; photometric measurements; photoelectric cells; measurement of high temperatures; characteristics of illumination, modern illuminants; and industrial and domestic uses of light.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 406. *Astronomy*

This course is designed to acquaint the student with the celestial sphere, celestial motions, and the phenomena associated therewith; to make him aware of the principles of astronomy. It consists of a survey of the solar system, practical problems in locating and identifying celestial bodies, a consideration of light and matter, the basic laws of motion, the physical-chemical properties of the sun and stars, stellar scales and maps, the measurement of distance, the cosmology of the universe, the history of astronomical concepts, and the regularities, irregularities, and evolution of the solar system.

This study is aided by the use of selected films and slides, actual sky study and field trips, the use of the sextant, octant, transit, spectroscope, sky maps, planetaria, and by telescopic observations.

Prerequisite: General college physics

Credit: 4 semester-hours

PHYSICS 407. *Aviation, I*

This course deals with the historical development of aviation, air traffic rules, airworthiness regulations, pilot certification, types of aircraft, aircraft structures, principles of aerodynamics, motions of an airplane, stability, piloting, motorless flight, and aircraft engines. It also develops an understanding of power performance, propellers, engine instruments, and flight instruments. Flight experience is made available as a part of this course.

Credit: 4 semester-hours

PHYSICS 408. *Aviation, II*

This course consists of the study of navigation; meteorology as applied to flight operations; radio communications; flight and navigational radio aids; instrument flights; air traffic control; radar; instrument landing system; ground control approach; turbojet, jet, and rocket flight; and recent advancements in aviation.

Credit: 4 semester-hours

PHYSICS 409. *Introduction to Radio Communication*

This course deals with direct and alternating current circuits; construction and operation of detectors; characteristics of audio and radio frequency amplifiers; vacuum tubes; and comparisons of amplitude modulated and frequency modulated transmission and reception.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 411. *Photography*

This course consists of laboratory work and field work supplemented by lectures and demonstrations. Emphasis is placed on physical principles in the construction of cameras, projection printers, tanks, and filters. Special attention is given to chemical principles in the development of films and paper, toning, intensification, and reduction.

Prerequisites: General physics and general chemistry or permission of the instructor

Credit: 4 semester-hours

SCIENCE

GRADUATE COURSES

SCIENCE 505. *Science Seminar for Junior and Senior High Schools*

This course is designed to afford opportunity for graduate students in science, supervisors, and science teachers: (1) to investigate research in science education; (2) to organize science experiences and science information with teaching materials for the public schools. Each member of the group selects a project. This project must be presented to the science faculty and graduate students for evaluation.

Prerequisite: Certification to teach science or matriculation for the A. M. degree in science

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

SCIENCE 401D. *The Teaching of Aviation in Secondary Schools*

This course covers the study of State aviation programs, texts, bulletins, free material for school use, demonstration equipment, tests, working models, visual aids, and references needed to teach aerodynamics, aircraft engines, meteorology, navigation, and aircraft communication in high schools. Field trips to airports and aviation industries are included.

Credit: 2 semester-hours

SCIENCE 404. *Problems in the Teaching of Science*

When a student has completed the assignment in student-teaching in a public high school in the State of New Jersey and has accumulated some experience with the problems of high school science instruction, he returns to the college campus for an intensive study of a limited number of problems in a single field of science.

Prerequisites: See the undergraduate bulletin for required courses in biology, chemistry, and physics.

Credit: 2 semester-hours

SCIENCE 405. *Field and Laboratory Studies in Science*

This integrated course is designed to show the relationship in the geological rock formations, the types of soil, water patterns, plant communities, and animal inhabitants in northern New Jersey, and the effects on human occupations. The field trips are for the purpose of gathering data and materials for intensive work in the labora-

tory. The experiments are designed to give the student acquaintance with the science of common but possibly unstudied features of the landscape; e. g., soils are reproduced in profile and examined microscopically, physically, and chemically; water from a variety of sources is tested for biological and chemical impurities; the census of plant and animal inhabitants of typical areas is associated with relevant factors in the environment. Discussions precede and follow the field and laboratory work to establish the probable history of the area and to suggest the probable trend, whether advancing or retrogressing, of its development. Stress is placed on the kinds of human control in specific communities which would best serve their progress.

Students are asked to submit an analysis of the geological and biological features of some known community, based on the skills and principles learned. Some other objectives of the course include an understanding of the organization of school museums for learning purposes, the making of ecological maps and illustrating them with photographs and diagrams, and the techniques of ecological field trips. Two instructors, a chemist and a biologist, collaborate in giving this course.

Prerequisite: Proficiency in biology and chemistry

Credit: 4 semester-hours

SCIENCE 409. *Senior High School Physical Science Demonstrations*

This course furnishes teachers of the physical sciences with demonstrations and experiments designed for work in high-school chemistry, physics, and applied physical science courses. A detailed study of demonstrations is made with emphasis on visibility and avoidance of failure. Emphasis is placed on sources of new demonstrations for the teacher.

Credit: 2 semester-hours

SCIENCE 410. *Junior High School Science Demonstrations*

This course covers the methods of experimental instruction in grades seven, eight, and nine. A detailed study is made of about three hundred demonstrations.

Prerequisites: General college chemistry, college physics, and a course in general biology

Credit: 4 semester-hours

SCIENCE 411. *Problems in Field Studies in Science*

In this course each student selects a phase of field science in which he does advanced research under the guidance of the instructor. Plant ecology, bird-life, pond life, fungi, tree diseases, and insect life are a few of the areas from which the student may choose.

Prerequisites: SCIENCE 405, Field and Laboratory Studies in Science, or its equivalent plus at least 12 points in biology

Credit: 2 semester-hours

SCIENCE 412. *Field Studies in Science: Biological*

Extensive instruction in the identification and natural history of fauna and flora is given in this course. Students examine the ecology of plant and animal communities (terrestrial and aquatic) and relate such communities with man's use of natural resources. The relation of field activities to present school curricula is considered. No previous science courses are required.

Credit: 2 semester-hours

SCIENCE 413. *Field Studies in Science: Physical*

Emphasis in this course is given to local and New Jersey geology, minerals, soils, and waters, with emphasis on the chemical and physical aspects of soil and water. Field trips are taken through the Kittatinny Mountains and to the Delaware Water Gap.

Credit: 2 semester-hours

SCIENCE 414. *Conservation of Plants and Animals*

The social, economic, and ecological implications of plant and animal conservation are considered together in this course. Discussion periods are interspersed with field trips to forests and wildlife management areas. Co-operating experts from State and Federal agencies bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 415. *Conservation of Soil and Water*

The social, economic, and ecological implications of soil and water conservation are considered together in this course. Discussion periods are interspersed with field trips to selected areas. Outside experts bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 418. *Three Centuries of Science Progress*

This course includes a study of fundamental world changes that have resulted in the past three hundred years from scientific discoveries. Topics considered are the following: a background of the beliefs and practices of the age; the processes of thought which produced skepticism; the experiments devised to disprove ruling opinions; the new concepts arising from fresh evidence; and the social, economic, and philosophic adjustments following the discoveries. Stress is given to the nature of scientific inquiry, its cumulative nature, its desire for freedom, and how to judge the probable fruitfulness of a research problem. The role which the man of science occupies in the world today is contrasted with his counterpart in earlier centuries. Class demonstrations of historical experiments, readings in the original literature, and lectures and discussions are employed by the three or more science teachers of the course.

Credit: 2 semester-hours

SCIENCE 419. *Field Science and Conservation*

In this course students study phases of field science which are related to conservation. The components of soil and water which produce good crops are studied. Students gain an understanding of farm practices by visiting several nearby farms. Forest and wood-lot management, wildlife preservation, mineral resources use, and other important areas in which science influences the conservation of natural resources are investigated.

Credit: 2 semester-hours

SCIENCE 420. *Water Supply and Conservation Problems*

This course is designed to provide students an opportunity to do an extensive study of the water supply problems in New Jersey and surrounding states. A study of water tables, rainfall, irrigation, drainage, flooding, water shed management, stream pollution, and soil erosion, give students a background for understanding the problems involved in domestic and industrial use of water. State and regional water conservation projects such as Incodel, Passaic Valley Flood Control, and Stoney Brook Watershed are studied. Teaching materials are supplied, and methods of presenting this material to elementary and secondary pupils are demonstrated and discussed.

Credit: 3 semester-hours

DEPARTMENT OF SOCIAL STUDIES

The teacher of social studies works in a field the boundaries of which are constantly changing and expanding. The necessity for constant study, especially with regard to the contemporary social situation and its problems, presses upon every secondary school teacher of the social studies. The Social Studies Department at Montclair intends to provide for such teachers courses of an advanced character which will help to keep them abreast of the changes in a changing world. It also will provide advanced courses for those teachers who wish to increase their preparedness in specialized secondary school subjects. Finally, it aims to provide for the teacher-in-service an opportunity for keeping informed concerning the changing techniques and problems of teaching the social studies. Selections from advanced courses of the sort just described lead to the Master's degree in the social studies.

In order to qualify for the Master's degree in social studies, candidates will either prepare a thesis or pass an oral examination based upon a selected field of research.

REQUIREMENTS IN THE SOCIAL STUDIES DEPARTMENT

In general, a candidate must offer thirty-two hours of graduate credit, at least eighteen of which must be in the field of Social Studies, six in the field of Integration, and six or eight (depending upon the number of social studies credits required) elective credits in fields closely related to the social studies. The following are the more specific requirements:

- I. All candidates must take a seminar course, either SOCIAL STUDIES 502 or SOCIAL STUDIES 518. A candidate *may* offer both these seminars since the subject-matter content, aside from the instructions in research, is different in both courses.
- II. The remaining social studies courses should represent a diversified choice from among the following fields:

Ancient and Medieval History

Social Studies 421, 422, 423, 425, 426, 427, 473

Modern European History

Social Studies 414, 420, 441, 448, 457, 458, 493, 506

United States History

Social Studies 408, 413, 419, 438, 447, 471, 474, 475, 480

The Americas

Social Studies 415, 417, 435A, 435B, 440A, 440B, 453A, 453B

International Affairs

Social Studies 412, 434, 442, 451

Economics

Social Studies 446, 450A, 450B, 456, 517, 522, 523, 524

Sociology

Social Studies 429, 439, 443, 444, 455, 476, 477, 479, 494

Political Science

Social Studies 402A, 402B, 407, 430, 433, 437, 515

Philosophy

Social Studies 404, 470, 478

Educational Techniques

Social Studies 472

Credits may also be chosen to the amount of six from the offerings in Field Studies, China Institute, Workshop in Citizenship Education, and United Nations Institute.

- III. All candidates must take the course, *INTEGRATION 503—Methods and Instruments of Research*, and four elective credits chosen preferably from the following:

Integration 500B, 504A, 505, 550, 440

- IV. Elective credits in fields other than the social studies should be chosen from among the following:

Integration 408, 410

English 402, 404, 432, 533, 536, 537, 545A, 545B

Business Education 409, 412

Geography 406, 408A, 408B, 409, 410, 411, 412, 413, 414A, 414B, 416, 418, 419, 420, 503, 504, 509

V. *Master's Thesis or Research Paper*

All candidates are required to complete either a Master's thesis or a Master's essay on a question or problem which has been chosen by the candidate for his specialization. The candidate is given an oral examination on the paper before a seminar of members of the Social Studies Department. Complete directions for this requirement may be obtained from the chairman of the department.

In the case of candidates offering undergraduate majors from institutions other than Montclair, it may be necessary to make more specific requirements with respect to choices among social studies and elective credits than is indicated above in order to fill gaps which may exist in the undergraduate major.

GRADUATE COURSES

SOCIAL STUDIES 502. *The Origin and Development of the American Constitution*

This course is an intensive study of the origin and framing of the Constitution of the United States. It aims to search out the roots and influences that determined our basic political institutions. The seminar method is employed and attention is given to the techniques of historical research and historical writing.

Credit: 2 semester-hours

SOCIAL STUDIES 506. *The British Empire from 1783*

This course deals with the evolution of the British Empire from the period of the old Colonial system to the present British Commonwealth of Nations. The rise of dominion government, the forces of anti-imperialism, and the various solutions suggested from the improvement of imperial relations are stressed.

Credit: 2 semester-hours

SOCIAL STUDIES 515. *History of Political Thought*

The major theories of representative political philosophers concerning the nature, functions, organization and sovereignty of the state are studied in this course. Among those discussed are: Plato, Aristotle, Cicero, Thomas Aquinas, Machiavelli, Luther, Calvin, Bodin, Hobbes, Locke, Spinoza, Montesquieu, Rousseau, Hume, Bentham, J. S. Mill, Burke, Hegel, Marx.

Credit: 2 semester-hours

SOCIAL STUDIES 517. *Money and Banking*

An opportunity is provided for an analysis of the monetary and banking principles and practices basic to modern economic organization. Consideration is given to the various theories of money, the relation of money to prices, banking systems and their operation, and the nature and significance of credit. Special attention is directed to an examination of the functioning of the Federal Reserve System in relation to the gold standard, a managed currency, stability, inflation and deflation.

Credit: 2 semester-hours

SOCIAL STUDIES 518. *Recent Trends in American History (1918 to the Present)*

Without attempting to reach final conclusions, this course analyzes the major problems which have influenced American life since the First World War. The new position of the nation in world affairs, the modifications of the old economic order, the progress of social and political change are all surveyed. This course, like Social Studies 502, is conducted by the seminar method and may be taken instead of that course. As the subject matter is different, except for the instruction in methods of research, both courses may be taken.

Credit: 2 semester-hours

SOCIAL STUDIES 522. *The Development of Economic Institutions and Ideas*

This course deals with the changing principles, institutions and ideas which determine the character of economic society. The doctrines of the more important schools of economic thought such as the Classical, Historical, and Institutional groups are emphasized, and the teachings of the Mercantilists, Physiocrats, Adam Smith, Malthus, Ricardo, Marx, Henry George, Veblen, Hobson, Commons, Keynes, and others are examined in relation to the important problems of money, credit, prices, business cycles, foreign and domestic commerce, property, wages, the nature of wealth and value, and economic planning.

Credit: 2 semester-hours

SOCIAL STUDIES 523. *The Economics of the Business Cycle*

The purpose of this course is to consider the nature of business cycles and their impact on the national economy, to survey business cycle theories, and to analyze the significant proposed methods of control for the purpose of developing a desirable public program conducive to economic stability.

Credit: 2 semester-hours

SOCIAL STUDIES 524. *The Economics of Public Fiscal Policy*

This is a course for the mature student interested in the effect of government tax policies on the national economy. Consideration is given to the various theories of justice in taxation: the incidence and shifting of the tax burden; the constitutional aspects of government finance; fiscal policy and full employment; taxation and economic inequality; the economics of public borrowing; and management of the national debt. Particular emphasis is placed on the conflicting

issues which have arisen from the increasing encroachment of public finance on both business and the consumer due to war and recurrent depressions. Attention is also given to such special programs as the Marshall Plan and aid to underdeveloped economic areas.

Credit: 2 semester-hours

SOCIAL STUDIES 525. *Workshop on Economic Education*

This workshop is designed to provide teachers, supervisors, and administrators with a better understanding of the American economy and its operation. Instruction is given by a staff of economists and curriculum specialists, supplemented by businessmen, labor leaders, and representatives of agricultural groups. Workshop committees with the help of specialists prepare syllabi and teaching materials. Special library facilities are provided as well as selected teaching aids and field trips.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions see the undergraduate catalog.

ANCIENT AND MEDIEVAL HISTORY

SOCIAL STUDIES 421. *Oriental Civilization*

This course presents the important contributions to civilization and social progress made in antiquity in three great centers of the Near East: Egypt, Mesopotamia, and Crete.

Credit: 2 semester-hours

SOCIAL STUDIES 422. *Greek Civilization*

The aim of this course is to present the development of Greek civilization from the earliest period to the beginning of the Christian era.

Credit: 2 semester-hours

SOCIAL STUDIES 423. *Roman Civilization*

This course traces the social changes in Rome from the earliest times to the end of the Western Roman Empire. The rise and fall of the empire are discussed with relation to their importance in medieval civilization.

Credit: 2 semester-hours

SOCIAL STUDIES 425. *Medieval Civilization*

This course covers the period from the decline of Rome to about 1500. It first emphasizes the blending of barbarian cultures with that of the Roman resulting in feudalism as a way of life. After that a study is made of the gradual evolution of towns, a trade and industrial economy on a broadening scale, the emergence of monarchical states, an intellectual awakening with the founding of universities, all of which leads finally to our modern system of national states.

Credit: 3 semester-hours

SOCIAL STUDIES 426. *Medieval History to 1498*

In the first part a study is made of the factors contributing to the political breakdown of the imperial principle, such as the growth of Christianity, barbarization of the West, and the expansion of Islam. The second part is devoted to the developments in Western Europe after 1200, stressing political movements, medieval commerce, guilds, growth of towns, and cultural changes.

Credit: 4 semester-hours

SOCIAL STUDIES 427. *Ancient History to 378 A. D.*

The first part of this course covers the Oriental period and the Greek through the Periclean Age. The second part covers the Hellenistic period from the rise of Philip of Macedon, stressing attempts at federalism.

Credit: 4 semester-hours

SOCIAL STUDIES 473. *The Arts in Western Civilization*

This course is designed to show how the social, economic, political, and religious movements in Western Civilization influenced the aesthetic expression of Europe from the Golden Age of Greece to the Rise of the Industrial Revolution. Greek, Roman, Byzantine, Gothic, Baroque, and Rococo art, architecture, and music are discussed and illustrated.

Credit: 2 semester-hours

MODERN EUROPEAN HISTORY**SOCIAL STUDIES 414. *Modern England***

This course deals both with the historical periods as such and with the influences of the political, economic, and social forces in the English literature of the century. The Napoleonic era, political reform, factory reform, the humanitarian movement, the Irish question, the ministries of Gladstone and Disraeli, and the interpretation of politics and literature are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 420. *European Outlook*

This course is designed to provide the background for understanding Europe today. The reality of ideological struggles between free and totalitarian countries is emphasized as a main source of present-day conflict.

Credit: 4 semester-hours

SOCIAL STUDIES 441. *Economic History of Europe*

The study of Europe from an economic point of view is particularly important in the light of present European problems and their relation to world-wide conditions. This course is a survey of the economic life and development of Europe from the emergence of the ancient civilizations to the beginning of the modern economic world.

Credit: 2 semester-hours

SOCIAL STUDIES 448. *The British Dominions*

This course deals with the role Canada, Australia, New Zealand, and South Africa are playing in present world affairs. Special emphasis is given to Canada and its dual position as an American state and a part of the British Empire.

Credit: 2 semester-hours

SOCIAL STUDIES 457. *Development of Russia*

Factors which have shaped the evolution of the Russian people, such as Byzantinism and the Greek Orthodox faith, the Synod, Tartar state organization, the Mir, Westernization from Peter to Lenin, Slavophilism, and dialectic materialism, are emphasized.

Credit: 2 semester-hours

SOCIAL STUDIES 458. *Russia as a World Power*

An analysis of Russia's relations with China, Iran, Turkey, the European continent, England and the United States is presented. Marxist world policy, as interpreted by Kautsky, Plekhanov, Jaures, Bukharin, Trotsky, Lenin, and Stalin, is described.

Credit: 2 semester-hours

SOCIAL STUDIES 493. *Western Europe Since World War I*

This course presents an outline of the rise of communism and fascism and the reaction of the western democracies to these movements. The Civil War in Spain, the Munich Pact, the failure of the League of Nations, diplomatic events of the World War II era, United Nations problems, the North Atlantic Pact, and special problems of western defense are emphasized. An evaluation of western Europe's significance for the United States is attempted.

Credit: 4 semester-hours

UNITED STATES HISTORY

SOCIAL STUDIES 408. *A History of New Jersey*

This course is designed to assist teachers in acquiring a better knowledge of their state. A study is made of the history of New Jersey from the point of view of the social, political, economic, and cultural development of the people from the beginning of settlement to the present. Special attention is given to the geographical and industrial aspects of the state, and the place of New Jersey in the national setting.

Credit: 2 semester-hours

SOCIAL STUDIES 413. *Economic History of the United States*

The great trends and movements in agriculture, finance, commerce, manufacturing, transportation, and industrial relations are traced from their beginnings in the colonial period to their contemporary expressions in the present crisis.

Credit: 2 semester-hours

SOCIAL STUDIES 419. *American Political Biography*

This is the study of the life and influence of the leading figures in American political and social history. It is the aim here to show the relation of each of these characters to the times in which he lived and to point out how he influenced the trend of American life. The study includes such leaders as Washington, Jefferson, Hamilton, Webster, Lincoln, Cleveland, T. Roosevelt, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 438. *The Literature of American History*

A brief description of the material available for the study of American history is followed by class practice in finding and using the primary sources of some of the facts commonly taught in schools.

Credit: 2 semester-hours

SOCIAL STUDIES 447. *Diplomatic History of the United States*

The purpose of this course is to show how we have become gradually conscious of our world interests and responsibilities, and the important role we have come to play in international politics.

Credit: 2 semester-hours

SOCIAL STUDIES 471. *The United States Since World War I*

This course surveys the major problems, economic, social, political, and international, which have marked our national development since the end of the first World War. It is intended especially for social studies seniors as a preparation for the second year of secondary school American history as provided for in the recently adopted state requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 474. *America in Transition*

This course surveys rapidly the results of the Civil War and then emphasizes the major trends, economic and social, which have made modern America. It is intended as a more advanced study than that which is made in the undergraduate course. The period covered is from 1867 to around 1914.

Credit: 2 semester-hours

SOCIAL STUDIES 475. *The History of American Thought*

This course considers the influential thinking in America from the Mayflower Compact to the Marshall Plan to see how certain ideas or trends of thought have grown out of situations and have in turn helped to mould the course of our history. The student should gain an appreciation for the American contribution to world culture, and an examination is made of outworn stereotypes which exist today. The writings and discourses of important American thinkers are considered including Mather, Paine, Jefferson, Emerson, Thoreau, and Veblen.

Credit: 2 semester-hours

SOCIAL STUDIES 480. *Social History of the United States*

This course presents a study of the social and cultural aspects of American history. As such, it supplements but does not take the place of economic and political history. The course considers population movements and growth, rural and urban social problems, status of women, family life, utopian ventures, mass media of communication, amusements and recreation, and human rights.

Credit: 2 semester-hours

THE AMERICAS

SOCIAL STUDIES 415. *Latin-American Relations of the United States*

This course aims to provide the information necessary to a clear understanding and accurate appreciation of the political, economic, and social relations that have developed between us and our Latin-American neighbors.

Credit: 2 semester-hours

SOCIAL STUDIES 417. *American Archaeology*

This course shows that the New World of the early discoverers was in reality far from new. The course discusses the prehistoric pueblo dwellers and early mound builders. The truly remarkable civilizations of the Mayas and the Incas are examined and compared with that of the Aztecs. North American tribes of Indians are also studied in order to evaluate their significant cultures.

Credit: 2 semester-hours

*SOCIAL STUDIES 435A. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part I*

This course deals specifically with the relations of the United States and the Caribbean countries. Attention is given to the dependencies of the United States in this region as well as to the independent republics. Twentieth Century political, economic, and cultural developments of this region are stressed in light of the inter-American system.

Credit: 2 semester-hours

*SOCIAL STUDIES 435B. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part II*

This course deals specifically with the Twentieth Century political, economic, and cultural life of the South American nations. The role which the South American states play in world affairs is stressed. Attention is given to post-World War II developments and adjustments in South America.

Credit: 2 semester-hours

*SOCIAL STUDIES 440A and 440B. *The Development of Central and South America as Colonies and Nations*

The first part of this course surveys the period of exploration and settlement in the colonies of South and Central America. The second

* Note: Courses 435A, 435B, 440A, and 440B are independent courses; none is prerequisite for another.

part studies the experiences of the various Latin-American nations under different forms of government.

Credit: 2 semester-hours each

SOCIAL STUDIES 453A. *The Development of Mexico and the Caribbean States*

It is intended to show in this course the historical development of Mexico and the Caribbean nations in terms of their political, cultural, social, and economic progress in order to develop understandings and appreciations for their cultures and present-day problems. The relationships of their problems to those of the other American nations are stressed and placed in proper perspective.

Credit: 2 semester-hours

SOCIAL STUDIES 453B. *The Development of Canada*

This course is devoted to the study of the historical background, geographical environment, governmental organization, economic behavior, and social conditions of the northern neighbor of the United States. Its professional objective is to provide the understanding and appreciation necessary to the student and teacher who may follow and interpret the growth, internal and external, of the Dominion of Canada and of its relation to the United States as well as to the British Commonwealth of Nations.

Credit: 2 semester-hours

INTERNATIONAL AFFAIRS

SOCIAL STUDIES 412. *International Government*

The attempts of the international community of states to express itself in a formal world organization are the subject of this course. The agencies which have been established to deal with international legislative, executive, administrative, and judicial problems are studied.

Credit: 3 semester-hours

SOCIAL STUDIES 434. *Contemporary World Affairs*

This course is devoted to a survey of the leading diplomatic, economic, political, and military issues before the world today. The backgrounds from which these international affairs have evolved are reviewed.

Credit: 2 semester-hours

SOCIAL STUDIES 442. *The Far East*

A study is made of the economic, social and cultural situation of the Far East, with particular emphasis on the historical background of China and Japan, and on our relations with the Philippines.

Credit: 2 semester-hours

SOCIAL STUDIES 451. *The Middle East*

This course is a survey of Indian and Moslem civilizations. Post-war planning for the region from the Near East through Persia, India, Burma, Thailand, and Malaya to the Netherland East Indies is discussed.

Credit: 2 semester-hours

ECONOMICS

SOCIAL STUDIES 446. *Current Problems in Economics and Government*

This course is designed to analyze the relationship of economics to government. The causes and results of governmental activities are discussed in the light of their economic significance and their bearing on public welfare.

Credit: 2 semester-hours

SOCIAL STUDIES 450A and 450B. *Modern Economic Problems and Policies*

The purpose of this course is to contribute to the general need for increased knowledge in the area of economic relationship, using the problem approach method of analysis. 450A begins with a brief recapitulation of the overall functioning of the economic system, after which the class proceeds to a detailed study of our broader economic problems and the public policies relating to them. Specifically, the problems are those relating to population and natural resources, the economic functions of government, the measurement of economic activity, monetary stability, basic banking problems, business cycles, marketing trends, economic inequality, and social security. 450B considers those problems associated with the world economy, international trade and exchange, monopoly and its regulations, the problems concerned with the control of public utilities, emergency price regulation and economic stabilization, labor problems, the problems of public finance, the public debt and fiscal policy, and, finally, the nature of comparative economic systems and their relations with each other.

Credit: 4 semester-hours

SOCIAL STUDIES 456. *International Economic Relations*

The purpose of this course is to study the significance of international trade and exchange to the economic life of our nation and to the world economy.

Credit: 2 semester-hours

SOCIAL STUDIES 482. *Conservation and Rural Economic Life*

This course provides for a study of one of the basic economic problems in America today. Land use, farm loans, price support of farm products, increased acreage production, conservation practices, are among the topics studied to give the student a better understanding of the relationship between rural and urban living. Trips are arranged to nearby farms, dairy cooperatives, farm bureaus, banks, and town meetings.

Credit: 2 semester-hours

SOCIOLOGY**SOCIAL STUDIES 429.** *Present-Day Social Problems*

Beginning with a survey of levels of living in the United States and their relation to the distribution of wealth and income, this course proceeds with a study of poverty and crime, their sources, treatment, and prevention.

Credit: 2 semester-hours

SOCIAL STUDIES 439. *The Family and Its Problems*

This course gives a history of the family, our American family patterns, the effects of social change, marital patterns of interaction, social roles, sources of conflicts and frustration, divorce and desertion, special problems in family life, economics of children and the home, social legislation pertaining to family problems, marital adjustments, personality change after marriage, parent-child relationships, and personality reorientation.

Credit: 2 semester-hours

SOCIAL STUDIES 443. *Youth and the Community*

This course is a sociological study of youth in its many relations to the community. Special attention is given to problems which arise in the relationship of youth and the community; e. g., juvenile delinquency, conditions contributing to maladjustment, poorly adjusted children, and educational and social agencies active in solving youth behavior.

Credit: 2 semester-hours

SOCIAL STUDIES 444. *The Social Bases of Human Relations*

This course emphasizes the social bases of human nature and personality. Primary and secondary groups, folkways, mores, and institutions are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 455. *Social Legislation*

This course analyzes the social, economic, and political adjustments which have come about in our society due to technological progress.

Credit: 2 semester-hours

SOCIAL STUDIES 476. *Personality Development and Group Relations*

A study is made of personality growth through social contacts, the environmental factors found in the home and family, neighborhood, play, and school groups. Methods of measuring the place of the individual in the group, analysis of the group process, ways of bringing about better life adjustment, and integrating experiences are the subject matter of the course. Concrete cases of maladjustment to society and disintegrated personality are studied. Agencies in the community which serve youth are visited, and leadership in community group activities is recognized as part of the course requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 477. *Rural Sociology*

During this course the student comes face to face with rural life in northern New Jersey. Social processes and problems are considered. Opportunities are provided for students to attend Grange meetings, county fairs, rural dances and parties, and to live for a day or two with a farm family.

Credit: 2 semester-hours

SOCIAL STUDIES 479. *Education and Intercultural Relationships*

Within our nation as within the world, along with common needs and interests, there exist differences between groups and individuals which act as barriers to satisfying human relationships. This course is devoted to a consideration of these barriers and of common interests and needs which exist in spite of such barriers. We study not only the existence of such conditions but also the attitudes, principles, and techniques which may make for better human relationships.

Credit: 2 semester-hours

SOCIAL STUDIES 483. *Modern Approaches to Social Problems*

This course is designed to acquaint students with techniques and practices developed in recent years for a scientific approach to problems of human relationship. Techniques to be studied include: sampling techniques for testing large groups, questionnaires, interviewing techniques, objective observation of culture patterns, objective observation in controlled laboratory situations, sociometrics, role-playing techniques, attitude testing, and use of semantic analysis in test construction. Students become acquainted with these techniques through the study of a variety of recent reports. The selection of items to be studied depends on the needs and interests of class members. This course is designed to aid in the development of attitudes and practices which make possible the use of a modern, scientific approach to social problems.

Prerequisite: An introductory course in sociology or special permission of the instructor

Credit: 2 semester-hours

SOCIAL STUDIES 494. *Social Studies and Conservation*

Everyday problems of living as they are related to and affected by the wise use of our natural resources are studied in this course. The student learns about the renewable resources, soil, water, forests, and wildlife, as well as the non-renewable resources, minerals, oil, and coal. Economic, social, community, national, and individual problems are approached by giving the student first-hand experiences gained through extensive field trips in northern New Jersey. This course is of particular interest to social studies and elementary school teachers but also forms an excellent experience background for all educational fields. Methods of teaching, courses of study, and teaching units are developed.

Credit: 2 semester-hours

POLITICAL SCIENCE

SOCIAL STUDIES 402A and 402B. *American and Comparative Government*

The basic facts and principles necessary for the teaching of civics, history, and the political aspects of Problems of American Democracy are studied. The first part is devoted to American national government, including the obligations and rights of citizens, the suffrage, political parties, the changing nature of the Federal system, and the executive, administrative, legislative, and judicial systems. The second part deals with similar political phenomena in England, France, Germany, Italy, and Russia.

Credit: 2 semester-hours each

SOCIAL STUDIES 407. *New Jersey State and Local Government*

A study is made of the State Constitution; New Jersey's place in the Federal system; the rights and duties of citizens; suffrage; political parties; the legislative, the executive, and administrative systems; the courts, the law enforcement and correctional systems; revenues and expenditures; public health, educational, highway, and other services; county and municipal government; and other local political units.

Credit: 2 semester-hours

SOCIAL STUDIES 430. *The Citizen and the State*

This course is designed to help any citizen become better acquainted with the many organizations by and through which our complex society manages itself. The emphasis is placed on government and political organizations, but the course also includes a study of the many other organizations of the community, the county, and the state that have to do with directing policy and maintaining controls. The aim of the course is to encourage intelligent appreciation and participation rather than simply to accumulate academic information. Consideration is also given to the ways in which such working knowledge can become a part of the experience of the pupils in our schools.

Credit: 2 semester-hours

SOCIAL STUDIES 433. *American Political Thought*

This course deals with contemporary trends and theories as they have emerged from social and economic conditions and as they are founded upon the bases laid down by such men as Hamilton, Madison, Washington, Jefferson, Marshall, Calhoun, Webster, Lincoln, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 437. *The Political Party System in the United States*

Among the topics discussed are: party organizations, the political boss, the political machine, party finances, the process of voting, election laws, primaries, conventions, platforms, presidential elections, majority rule, the development of the party system, sectional politics, the farm vote, the labor vote, and the future of party government in the United States.

Credit: 2 semester-hours

PHILOSOPHY

SOCIAL STUDIES 404. *The Philosophy of History*

It is the purpose of this course to investigate the relation of history to the other social studies and also the major attempts to find the meaning of history. A brief survey is made of the leading philosophies of history.

Credit: 2 semester-hours

SOCIAL STUDIES 470. *History and Principles of Philosophy*

This course presents a study of the history of philosophy and of the important principles contributed by outstanding philosophers from Thales to Gentile. Much of the discussion is centered on the three types of philosophic thought: naturalism, idealism, and pragmatism. Among the philosophers considered are: Plato, Aristotle, Bacon, Spencer, Rousseau, Hegel, James, Dewey, and Gentile.

Credit: 2 semester-hours

SOCIAL STUDIES 478. *Theories of Social Justice from Antiquity to Our Time*

This course is designed to show how specific ideas of social justice resulted from specific historical conditions and events. A comparison of social upheavals among the ancient Hebrews, Greeks, and Romans; the early Christians; the peasants in the Middle Ages; the religious rebels of the early Renaissance; and the revolutionaries of the modern age is to furnish background material for an understanding of present social thought. Lectures and discussions cover the social prophets of the Hebrews; Lycurgus; Cleomenes; Plato; Gracchus; Spartacus; the Essenes, the Waldensians, the Albigensians, and the Hussites; Wycliffe; John Ball; and on selected social thinkers of the last few centuries, such as Hobbes, Locke, Hume, Rousseau, the Utopians, the Socialists, and the Anarchists.

Credit: 2 semester-hours

EDUCATIONAL TECHNIQUES

SOCIAL STUDIES 472. *Modern Social Studies Instruction and Supervision*

This course is designed primarily to assist teachers and supervisors to obtain a comprehensive view of recent curriculum trends, current subject-matter tendencies, and newer practices in secondary school social studies. Topics discussed include: materials, methods, and

techniques; use of audio-visual aids; courses of study and experimental problems; professional literature; and problems of the critic teacher and the supervisor.

Credit: 2 semester-hours

FIELD STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 460. *Central Eastern Region*

This fifteen-day tour of Pennsylvania, Maryland, Virginia, West Virginia, North Carolina, and Tennessee covers the major points of historic interest associated with the Colonial Period, the American Revolution, and the Civil War, and the geographic features of the coastal plain, the Piedmont, the Great Valley, and the Appalachian Mountains in these states. Travel is by modern chartered motor coach, and overnight stops are made at first-class hotels. Among the places visited are: Valley Forge, Philadelphia, Baltimore, Annapolis, Washington, Arlington, Alexandria, Mt. Vernon, Fredericksburg, Richmond, Washington's birthplace at Wakefield, Lee's plantation at Stratford, Yorktown, Williamsburg, Jamestown, Raleigh, Chattanooga, Asheville, Great Smoky Mountains, Norris Dam, Jefferson's Monticello at Charlottesville, Natural Bridge, Sky-line Drive in the Shenandoah National Park, Luray Caverns, Winchester, Harper's Ferry, Frederick, Gettysburg, and the Pennsylvania Dutch area around Lancaster and Ephrata.

Credit: 3 semester-hours

SOCIAL STUDIES 461. *New England and French Canada*

This field study course gives an opportunity to study by direct observation the historical and geographical features of New England and the Province of Quebec. The trip, occupying the twelve days immediately following the summer session, is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers the lower Connecticut Valley, including Hartford, Springfield, Northampton, and Deerfield; the Rhode Island cities of Providence and Newport; historic Massachusetts towns such as Plymouth, Boston, Lexington, Concord, Salem, and Marblehead; the coast of New Hampshire and southern Maine; the White Mountains in the Mt. Washington and Franconia Notch area; the Canadian Province of Quebec, including the ancient French city of Quebec, Montmorency Falls, St. Anne de Beaupré, Montreal; the western shores of Lake Champlain, Lake George, and the Hudson River. It is an indispensable background for an understanding of Colonial and Revolutionary life and history in this region.

Credit: 3 semester-hours

SOCIAL STUDIES 462. *Continental United States*

This field study course consists of sixty-two days of directed travel, including all of July and August, and provides an opportunity for gaining an integrated view of our country as a whole. The trip is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers about 12,500 miles and visits 26 states and 6 National Parks. Among the major points of interest are Gettysburg, Natural Bridge, Blue Ridge and blue grass region, Mammoth Cave, Lincoln shrines in Kentucky and Illinois, Dodge City, Royal Gorge, Pikes Peak, Denver, Rocky Mountain National Park, Taos and other Indian Reservations, Santa Fe, Petrified Forest, Painted Desert, Grand Canyon, Bryce and Zion National Parks, Hoover Dam, Los Angeles, Hollywood, San Diego, San Juan Capistrano and other Missions, Tia Juana, Santa Barbara, Sequoia and Yosemite National Parks, Monterey, San Francisco, Sacramento, Lake Tahoe, Reno, Donner Pass, manimoth redwood groves, Crater Lake, Columbia River Valley, Portland, Seattle, Mt. Rainier, Grand Coulee Dam, Spokane, Butte, Yellowstone National Park, Salt Lake City, pioneer trails of Wyoming, Black Hills, Chicago, Detroit, Toronto and Niagara Falls. All important geographic and historical features are studied under the instruction of members of the college faculty and local specialists. Write for detailed descriptive folder.

Credit: 10 semester-hours

SOCIAL STUDIES 463. *The Lower South*

This is a fifteen-day field study course, covering the gulf coasts of Louisiana, Mississippi, and Alabama, and both coasts of Florida. Among the topics to be observed and studied are the Acadian and Creole culture in and around New Orleans; the industrial, historical, and recreational features of Biloxi, Mobile, and Tallahassee; the tobacco, citrus, and sponge-fishing industries in the neighborhood of Tampa, St. Petersburg, Lake Wales, Sarasota, and Fort Myers; the plant and animal life of the Everglades along the Tamiami Trail; the millionaire playgrounds of Miami and Palm Beach; and the historical shrines of America's oldest city, St. Augustine. It is usually offered during the Christmas holidays.

Credit can be given for only one of the following courses: SOCIAL STUDIES 463, 464, 467, and 484.

Credit: 3 semester-hours

SOCIAL STUDIES 464. *Southeastern Region and Gulf Coast*

This is a twelve-day field study course covering the Atlantic Coast from Baltimore to Savannah and the Gulf Coast from Tallahassee to New Orleans. It surveys the economic, geographic, and historical

aspects of the coastal plain, the piedmont, and the lower Mississippi Valley visiting, among other places, Richmond, Williamsburg, Charleston, Savannah, Tallahassee, Pensacola, Mobile, Biloxi, New Orleans, Baton Rouge, Natchez, Vicksburg, Jackson, Birmingham, Atlanta, Greenville, Charlotte, and Greensboro. It is offered during the Christmas holidays.

Credit can be given for only one of the following courses: SOCIAL STUDIES 463, 464, 467, and 484.

Credit: 3 semester-hours

SOCIAL STUDIES 465. *The Border States*

This is a nine-day field study course covering mainly the states which were border or frontier states during the early stages of the westward movement or border states between the North and the South during the Civil War. The route of the trip is down the eastern shore of Delaware and Maryland to Williamsburg, up the southern shore of the James River to Appomattox and across the mountains to Natural Bridge; then down the Great Valley to Knoxville and the Norris Dam, westward to Nashville, north again to Mammoth Cave, the Lincoln Memorial, and the Blue Grass Country of Kentucky, up the Ohio River through the land of iron and steel to Pittsburgh, and finally homeward across the Appalachians by way of the Pennsylvania Turnpike.

Credit: 2 semester-hours

SOCIAL STUDIES 466. *Puerto Rico and the Virgin Islands*

This is a nine-day field study course devoted to a survey of our nearest island possessions. It includes a rather thorough exploration of San Juan and its vicinity, including the University, the rain forest and the submarine gardens, a two-day trip through the island visiting pineapple, coffee, sugar, textile, and rum producing areas, churches, homes, and historic places. One day is spent in St. Thomas, largest of the Virgin Islands. The trip to and from the islands is made by air. It is usually offered during the Christmas holidays.

Credit: 2 semester-hours

SOCIAL STUDIES 467. *Florida*

This is a field-study course covering the Florida peninsula including both coasts, the Everglades, and the Lake Region. Among the places visited are ancient St. Augustine; the winter playgrounds at Palm Beach and Miami; the Tamiami Trail through the Everglades; the west coast cities of Sarasota, St. Petersburg, and Tampa; and the Lake Region in the neighborhood of Lake Wales and Orlando. The

trip affords opportunity for topographical, historical, and industrial studies. It is usually given during the Easter vacation.

Credit can be given for only one of the following courses: SOCIAL STUDIES 463, 464, 467, and 484.

Credit: 2 semester-hours

SOCIAL STUDIES 469. *Mexico*

This field-study course aims to give a comprehensive view of contemporary Mexican life with its geographic, economic, historic, and cultural setting. Transportation to and from Mexico City is by air and in Mexico by private cars. Overnight stops and meals are at the best hotels. Places visited include Xochimilco, Acolman, Teotihuacan, Fortin, Puebla, Oaxaca, Guadalajara, Queretero, Guanajuato, Patzcuavo, San Miguel de Allende, San Jose Purua, Morelia, Toluca, Taxco, and Cuernavaca. The itinerary is carefully planned to include all points of major interest and significance. Special studies may be made in the fields of geography, history, art, architecture, archaeology, sociology, economics, and other fields.

Credit: 3 semester-hours

SOCIAL STUDIES 481. *The West Indies*

This course consists of ten days of directed travel in five countries in the Caribbean region. Transportation is by air and private cars with overnight stops at the best hotels. Opportunities are given for study of geographic, historic, economic, and cultural phenomena in Puerto Rico (one day), Santo Domingo (two days), Haiti (two days), Jamaica (two days), Cuba (two days), visiting San Juan, Cuidad Trujillo, San Cristobal, Port au Prince, Kenscoff, Kingston, Havana, and rural areas in all countries.

Credit: 2 semester-hours

SOCIAL STUDIES 484. *Gulf Coast and Lower Mississippi Valley*

This is a nine-day field-study course covering the Gulf Coast from Mobile to New Orleans. It also surveys the economic, geographic, and historical aspects of the lower Mississippi Valley visiting among other places Mobile, Biloxi, New Orleans, Baton Rouge, Natchez, Vicksburg, and Jackson.

Credit can be given for only one of the following courses: Soc. St. 463, 464, 467, and 484.

Credit: 2 semester-hours

BACKGROUND STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 492A and B. *Studies in American Life—The East and the West*

These courses comprise a unit designed to give the student an integrated understanding of the United States as a cultural, historic, geographic, social and political unit and, at the same time, an appreciation of the regional differences which characterize American unity in diversity. It should be useful to those who have traveled, to those who intend to travel, and to those who, although they cannot travel, wish to broaden their knowledge of our country. The geography, the history, the literature, the art, the music, the architecture, the people, the manners and customs, the flora and fauna, the economic, social, and political problems, and the significant personalities of the regions studied are discussed and illustrated with slides, films, and other audio-visual materials. Either course may be taken without the other.

The subject matter of SOCIAL STUDIES 492A covers New England, the Central East, the South, and the Middle West east of the Mississippi River. The subject matter of SOCIAL STUDIES 492B deals with the regions west of the Mississippi, i. e., the Great Plains, the Mountain States, the Southwest, the Northwest, and California.

Credit: 2 semester-hours each

INSTITUTES AND WORKSHOPS

SOCIAL STUDIES 490A. *United Nations Institute*

This course covers four and one-half hours per day for ten consecutive days excluding Sunday. It consists of basic lectures on factual backgrounds by the instructor, supplementary lectures by visiting lecturers from the United Nations and other organizations, discussions, workshop and library projects, demonstrations of the use of audio-visual materials, and field trips to the United Nations. Included among the subjects studied are the national state system, war and peace, world organizations (past, present, and proposed), the national armaments problem, international law, the international police proposal, pacific methods of settling international disputes, and the outlook for international co-operation.

Credit: 3 semester-hours

SOCIAL STUDIES 490B. *The United Nations and American Foreign Policy*

The purpose of this course is to help provide an understanding of the United Nations in its operation as a basis for American foreign policy. In that the Charter of the United Nations forms the backbone of American cultural, economic, and military cooperation with other nations, its interpretation and the application of our aid to needy people open a wide area of disagreement within the nation. Following the principle that American foreign policy should rest upon an intelligent understanding on the part of the electorate and working within the framework of the policy of the State Board of Education with regard to controversial issues, the United Nations Institute deals with the strong as well as the weak aspects of this newly created world organization. This institute serves the needs of teachers of all grades, students of foreign policy, the public at large, as well as visitors from other lands who are here to study the ways of American democracy. It is available to students who have completed the requirements for SOCIAL STUDIES 490A, *United Nations Institute*, or the equivalent.

Credit: 3 semester-hours

SOCIAL STUDIES 490C. *The Specialized Agencies of the United Nations*

The purpose of this course is to give the student an opportunity to learn about the various activities of the specialized agencies of the United Nations. The course deals with the positive activities of the United Nations in the various areas of human welfare. Visiting lecturers from the agencies themselves and from areas of the world receiving such help are a regular part of the class work. Trips to the New York offices of these agencies and individual research make up the balance of the work for this course.

SOCIAL STUDIES 490A, *United Nations Institute*, or its equivalent is a prerequisite for this course.

Credit: 3 semester-hours

SOCIAL STUDIES 490D. *The United States and World Affairs*

The purpose of this course is to give the student an opportunity to make a thorough survey of the leading problems in world affairs. Visiting lecturers from agencies concerned with the problems of today's world supplement the basic information supplied by the regular members of the Institute staff. Included among the subjects studied are: Underdeveloped areas of the world, technical assistance, international trade and cultural interdependence. Special emphasis is placed on the relations of the United States with such areas of the world as the Far East, Eastern Europe, the Middle East, Western Europe, and Latin America.

This course is designed primarily for teachers who feel the need for accurate background information and improved teaching materials and techniques for use in their classrooms. In addition to the conventional lectures, this course features the showing of the latest films in the field of world affairs, field trips to the United Nations and to foreign areas of New York, exhibits of teaching materials, demonstrations of teaching techniques and materials, folk singing, and folk dances suitable for classroom use.

Credit: 3 semester-hours

SOCIAL STUDIES 490E. *Latin America, A Survey*

The purpose of this course is to give the student an opportunity to make a thorough survey of Latin America. Visiting lecturers from agencies concerned with Latin American affairs supplement the basic information supplied by the regular members of the Institute staff. Included among the subjects studied are: Geographic setting and influences, pre-European cultures, exploration and settlement, independence, the Monroe Doctrine, economic colonialism, Pan-Americanism, present-day Latin America, United States relations with Latin America, and Latin America and the United Nations.

This course is designed primarily for teachers who feel the need for accurate background information and improved teaching materials and techniques for use in their classrooms. In addition to conventional lectures, this Institute features the showing of the latest films on Latin America, field trips to the United Nations and Latin American centers of New York, exhibits of materials suitable for teaching, demonstrations of teaching techniques and materials, folk singing, and folk dances suitable for classroom use.

Credit: 3 semester-hours

SOCIAL STUDIES 490F. *Russia in the Modern World*

The purpose of this course is to give the students an opportunity to study the development of modern Russia and the impact of its emergence as a world power. Particular attention is devoted to the role played by the geographical and historical forces that influenced Soviet foreign policy. The course meets three hours a day for each of fifteen days. Visiting lecturers from agencies concerned with Russian affairs supplement the basic information supplied by the regular members of the Institute staff. Included among the topics studied are: The nature and source of Soviet power, land and people of the Soviet Union, the role of the Communist Party, United States relations with Russia, Russia in the United Nations, Russian interest in the Far East and the Middle East, and the Cold War.

This course is designed primarily for teachers who feel the need for accurate background information and improved teaching materials

and techniques for use in their classrooms. In addition to conventional lectures, this course features the showing of the latest films on the Soviet Union, field trips to New York City, exhibits of materials suitable for classroom use and demonstrations of teaching techniques.

Credit: 3 semester-hours

SOCIAL STUDIES 490G. *Western Europe at Mid-Century*

The free nations of Western Europe are examined for their influence upon world affairs as well as for the ways in which they are affected by developments on the international scene. They are studied as the point of East-West contact and as a center of East-West rivalry. Particular attention is paid to the changing status of Western European powers and to the geographical, economic, and historical forces which are bringing about this change. Included among the areas studied are: political and governmental institutions; geographic influences; intra-European cooperation; economic bases of politics and history; pertinent historical trends and developments; social and intellectual developments; and the role of tradition and provincialism. Among the nations considered are: the United Kingdom, France, the Benelux countries, West Germany, the Scandinavian countries, Italy, Portugal, Spain, and Ireland.

This course is designed primarily for teachers who feel the need for up-to-date background information and improved teaching materials and techniques for use in their classes. All teachers interested in world affairs are given the opportunity to build up a personal background of information and understanding. Background lectures, small study groups, field trips to New York City, films and exhibits of materials suitable for classroom use are included in the program. Spokesmen for the various national points of view supplement the basic information presented by the regular members of the Institute staff.

Credit: 3 semester-hours

SOCIAL STUDIES 491A. *Workshop in Citizenship Education, Part I*

The purpose of this workshop is to present a study of what has been done in some of the many projects in citizenship education throughout the country. Special emphasis is placed on the plans and materials developed by the Citizenship Education Project now being conducted by Teachers College, Columbia University, and financed by the Carnegie Corporation. Montclair has been one of the eight teachers colleges cooperating in this project, and the College High School is a cooperating school. Consultants are invited in as needed. Attention is given to programs and practices already in use in the schools, and advantage is taken of the state-wide project in collecting from the schools experiences in education for character and

citizenship. New means for citizenship education are sought, and methods of evaluation are reviewed. Experience in the group processes essential to democratic action is provided. It is hoped especially to include in the workshop those who have been or may be serving as training teachers for Montclair student teachers, especially in the fields of social studies and English. Principals and administrators who want to join with others in learning how to make more effective the citizenship education in the schools with which they are connected are invited to participate. Each participant in the workshop works on actual plans for carrying out such education in the school and the classroom.

Credit: 2 semester-hours

SOCIAL STUDIES 491B. *Workshop in Citizenship Education, Part II*

Membership in this workshop course is limited to those who have completed SOCIAL STUDIES 491A, and participants in this advanced workshop meet and work with the members of the SOCIAL STUDIES 491A workshop. On the basis of previous experience, each member of the SOCIAL STUDIES 491B group is expected to work out several laboratory practices or similar projects for use in the classroom or the school.

Credit: 2 semester-hours

SOCIAL STUDIES 499. *Introduction to Chinese Culture*

A number of authorities introduce first-year students to the rise, growth, and maturing of Chinese civilization, as well as to the fundamental problems of China today, including the conflict of ideologies. The course is given in twelve days. Each day there are two hours of lectures in the morning; after lunch a period of forty-five minutes is devoted to informal talks including further discussion on Chinese music, philosophy, Chinese school days, festivals, and calligraphy. Some time is also given to the singing of Chinese songs and the showing of motion pictures. During the two-hour workshop period the students prepare their projects, teaching units, and background material under the direction of faculty members.

Credit: 3 semester-hours

SOCIAL STUDIES 496A. *The Chinese Society*

This course is an intensive study of the formation of the Chinese people, their collective life, and the interaction of natural and human forces with the resultant social organizations from early times to the present. Particular emphasis is placed upon the development of social institutions, including the family, labor guilds, educational systems,

and religious institutions, as well as their transformation and modernization under the impact of different forces from the West. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*

Credit: 3 semester-hours

SOCIAL STUDIES 496B. *China: The Evolution of a Nation*

This course is an intensive study of the Chinese civilization, the forces underlying the development of the national character of the Chinese people, their contacts and conflicts with other peoples and cultures from historical times to the present. Because of its voluminous material, this course does not attempt to cover the whole span of Chinese history, but it is an integrated presentation of the maturing of the Chinese people as a nation. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*

Credit: 3 semester-hours

SOCIAL STUDIES 497. *Chinese Philosophy*

This course shows how the ancient philosophies, Confucianism, Taoism, Buddhism, Mohism, can be applied to the China of today and how they affect modern Chinese thought. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*, or an equivalent course in philosophy

Credit: 3 semester-hours

SOCIAL STUDIES 498. *China and the Far East*

This course presents to the student a factual and up-to-date analysis of the forces that are operating in the Far East and shows how these forces may affect future developments in the critical area of the world. China, with its people as a key area in the Far East, is interpreted in terms of current economic, political, and cultural developments. Recognized experts from the various countries in the Far East present problems from the standpoint of their experience and background. The course itself is synthesized by a course director who is a serious student of China and its neighbors.

Credit: 3 semester-hours

FINE ARTS 414. *History of Chinese Art*

For a description of this course, see page 126.

Credit: 3 semester-hours

FINE ARTS 416. *Appreciation of Chinese Art*

For a description of this course, see page 126.

Credit: 3 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

For a description of this course, see page 40.

Credit: 3 semester-hours

OTHER COURSES THAT MAY BE USED AS ELECTIVES

For more complete descriptions see the undergraduate catalog.

FINE ARTS 400. *Philosophy of Art*

This course is designed to give the student a knowledge of the various theories of art and the nature of the art experience. Readings include the works of major philosophic writers, artists, and psychologists. Through discussion each student is encouraged to develop a personal philosophy of art education.

Credit: 2 semester-hours

FINE ARTS 401. *Art Education*

The content of this course includes a study of research findings of the pattern of child development in plastic and graphic media; the organization and presentation of art experience to the children of grades one through twelve; and the relationship of art to other areas of the curriculum; and the arts in the extra-curricular program within the school and community. Practical aspects of teaching art including materials, tools and their source, cost, care and organization are experienced through classroom participation.

Credit: 2 semester-hours

FINE ARTS 402. *Textile and Costume Arts*

This course includes the designing and making of woven and decorated textiles for use. Textiles are woven on simple handmade looms, and on professional floor and table looms. Textiles are decorated by tie-dye, block print, batik, stencil, painting, silk screen and needlework. Costume designing emphasizes the suitability of line, color, and fabric to the individual and the occasion. Historic as well as contemporary fabrics and costume are studied through reading, visits to museums, shops, and galleries.

Credit: 4 semester-hours

FINE ARTS 403. *Print Making*

The many ways of making prints: etching, dry point, wood cuts, and wood engraving, lithography, silk screen, photograms, and photography are learned in personal production which emphasizes the relation of material, tool, and process. Adaptation of these professional media to classroom use is one aspect of this course. The work of masters in these various types of print making are studied in reproductions and in museum trips.

Credit: 4 semester-hours

FINE ARTS 406. *Art Workshop*

The workshop is designed to allow the student to have a concentrated experience in an art form of his choice. Each student projects his own problem in consultation with, and under the direction of, a faculty member. In addition the student is expected to set up an exhibit of the work he has accomplished during his four years.

Credit: 4 semester-hours

FINE ARTS 408. *Creative Painting*

This course gives the student an opportunity to use the materials of the painter for personal creative experience. Through the use of oils, water colors, and other media, the student is encouraged to work on landscape, figure, and free imaginative composition. Emphasis is placed on individuality of expression, variety of subject matter, and experimentation. No previous art experience is necessary.

Credit: 2 semester-hours

FINE ARTS 414. *History of Chinese Art*

In this course the developments and distinguishing characteristics of the major arts of China are traced by specialists and are surveyed from the point of view of their historical development. An historical survey of the development of Chinese art from the dawn of civilization to the present day is made which includes the role played by foreign influences such as the spreading of Buddhism and the Chinese influence on other parts of the world. There are twenty-four hours of lectures in the morning and round-table discussion and library work in the afternoon. During the afternoon workshop period the technique of Chinese painting is demonstrated. Although there is no prerequisite for this course, it is suggested that those who enroll should have some knowledge of art or have taken SOCIAL STUDIES 499—*Introduction to Chinese Culture*.

Credit: 3 semester-hours

FINE ARTS 416. *Appreciation of Chinese Art*

This is an introductory course on Chinese art in its various aspects: its historical development; aesthetic principles; and various forms such as calligraphy, painting, sculpture, bronze and jade, pottery and porcelain, architecture, etc. Topics include the philosophical basis of Chinese art, nature in Chinese art, and symbolism in Chinese art. Each lecture is illustrated by photographs and lantern slides as well as demonstrations. Students have an opportunity to learn the elements of Chinese painting from widely recognized Chinese artists.

Credit: 3 semester-hours

FINE ARTS 450. *Print Making I—Silk Screen Printing*

This course affords an opportunity to study and practice the graphic art techniques of silk screen from the creation of the master designs through the construction of necessary printing facilities and printing. Experiences include the use of tusche, glue, stencil lacquer, and photographic techniques.

Credit: 2 semester-hours

FINE ARTS 474A and B. *Arts and Crafts in Education, I and II*

Included in this course are workshop activities in the arts and crafts of the elementary and secondary school program. Painting, drawing, modeling, pottery, weaving, papier-mache, paper sculpture, school display techniques and lettering, wood, leather, plastics, metal work, and puppetry are materials and processes which are explored.

Credit: 2 semester-hours each

FINE ARTS 500. *Contemporary Art*

This course presents a survey of the major influences and trends in the development of painting, sculpture, and architecture of this century. The use of visual materials such as slides, art films, and reproductions supplement discussion and studio participation. This course is planned for students who wish to enlarge their general education in art and requires no technical competency.

Credit: 3 semester-hours

GEOGRAPHY 503. *Economic Geography of the United States and Canada*

A study is made of the agricultural, industrial, and commercial development of the United States and of the geographic factors that have contributed to that development.

Credit: 2 semester-hours

GEOGRAPHY 504. *Economic Geography of Europe*

This course constitutes a study of the economic development of the nations of Europe in relation to the environmental background and resources that have made Europe one of the world's leading continents.

Credit: 2 semester-hours

GEOGRAPHY 509. *Economic Geography of Asia*

This course constitutes a treatment of the economic and commercial development of the countries of Asia in relation to their natural environment.

Credit: 2 semester-hours

GEOGRAPHY 406. *Geology*

This course deals with the earth and its geographic, stratigraphic, and structural development throughout geologic time; the record of the evolution of life as interpreted through a study of rocks and fossils.

Credit: 2 semester-hours

GEOGRAPHY 408A and 408B. *Political Geography*

This course deals with the geographic conditions influencing the significant changes in the political divisions of the world. Emphasis is placed on geographic factors influencing racial, religious, commercial, and political adjustments between nations.

Credit: 2 semester-hours each

GEOGRAPHY 409. *Economic Geography of the British Isles*

A comprehensive treatment of the resources of the British Isles is given, and the influence of the natural environment upon the utilization of those resources in the economic, social, and political development of the British Empire is evaluated.

Credit: 2 semester-hours

GEOGRAPHY 410. *Economic Geography of Caribbean America*

This is a study and interpretation of the major and important minor economic areas of Caribbean America in relation to the natural environment.

Credit: 2 semester-hours

GEOGRAPHY 411. *Geographic Influences in American History*

A study is made of the geographic factors influencing the development of social, economic, and political life in America.

Credit: 2 semester-hours

GEOGRAPHY 412. *Geography of Africa, Australia, and New Zealand*

A study is made of the activities of the people of Africa, Australia, and New Zealand in relation to their natural environment. Attention is given to the influence of geographic factors upon the post-war adjustments and the possible future relations of these countries with the United States.

Credit: 2 semester-hours

GEOGRAPHY 413. *Economic Geography of South America*

This course constitutes a study of the influence of the natural environment upon production and utilization of resources in the economic, social, and political development of the various nations of South America.

Credit: 2 semester-hours

GEOGRAPHY 414A and 414B. *Advanced Economic Geography*

This course is a study of the influence of the physical environment upon the production of, the trade in, and the utilization of the important agricultural, forest, mineral and sea products, and the manufactured commodities of the world.

Credit: 2 semester-hours each

GEOGRAPHY 416. *Conservation of Natural Resources*

This course includes a study of the natural resources of the United States, their past and present exploitation, their influence on the development of the nation, their conservation and future use.

Credit: 2 semester-hours

GEOGRAPHY 418. *Regional Geography of North America*

This course constitutes a detailed regional treatment of the continent of North America. Emphasis is placed upon the human activities of the various regions in relation to their natural environment and the relations of the regions to each other.

Credit: 2 semester-hours

GEOGRAPHY 419. *Economic Geography of the Union of Soviet Socialist Republics*

This course is designed to give a comprehensive and objective treatment of Soviet Russia's natural resources and industrial potential in relation to the geographic environment. Special emphasis is given to the formative periods of Russia's industry to show the significance of and the continuous operation of geographical factors in the economic development of Russia.

Credit: 2 semester-hours

GEOGRAPHY 420. *Field Geography and Conservation*

This course constitutes a study of the relation between relief features of northern New Jersey, the location of natural resources, and the way in which land use and population distribution follow these patterns. Emphasis is given to the reading and interpretation

of topographical maps and aerial photographs and to a study of the United States Geological and Soil Surveys of this region. By means of an actual land-use survey the student comes to appreciate the problems of conservation as they grow out of man's use of natural resources.

Credit: 2 semester-hours

GEOGRAPHY 421. *Population Problems of the World*

An intensive examination of the factors which influence the present-day distributional pattern of the world's people and the political, economic, and social consequences of this development are considered. Particular attention is placed on man-land relationships as related to population problems of contemporary nations.

Credit: 3 semester-hours

GEOGRAPHY 422. *Geography of the American Indian*

This course is designed to survey the culture of the American Indian (from the Ice Age to the Reservation) in relation to his geographic environment. It affords an insight into the geography and cultural history of North America prior to the coming of the white man, deals with the problems experienced and created by alien cultures when they meet for the first time, and culminates with discussion of the Indian problems of the present day. It serves to introduce the student to methods employed in interdisciplinary attacks upon cultural problems. The views of the geologist, archaeologist, cultural anthropologist, cultural historian, as well as the geographer are critically examined.

Credit: 3 semester-hours

GEOGRAPHY 423. *The Geography of Transportation*

An intensive examination of the principles of transportation geography is provided. The different methods of transportation are studied systematically with regard to their development and present-day role in regional development. The growth of international specialization and the resulting economic development are also considered.

Credit: 3 semester-hours

MUSIC 405. *Orchestra Conducting and Score Reading*

This course aims to develop skills in orchestra conducting and score reading. It includes a study of the particular type of ear training needed in conducting, the technique of the baton, score reading, and interpretation. A special feature of this course is the presentation of a large amount of musical examples taken from standard repertory

which contain practically all technical and psychological problems which face the conductor. Practical experience in conducting is given in the College High School Orchestra and the College Orchestra.

Prerequisite: MUSIC 305

Credit: 2 semester-hours

MUSIC 406. *Epochs in Musical Development, Part III*

This course is a continuation of MUSIC 208 and makes a study of the late romantic period and the rise of modern music. It includes a study of the music of Richard Strauss, Bruckner, Prokofieff, Mahler, Debussy, Tschaikowsky, Mussorgsky, Stravinsky, Sibelius, Schoenberg, Bartok, and Hindemith.

This course is professionalized for use in the teaching of music appreciation in the classroom.

Credit: 2 semester-hours

MUSIC 407. *The Development of the Opera*

This course deals with the origin, development, and characteristics of opera in the Italian, French, German, and Russian schools. Class analyses are made of representative operas of these schools. The content of this course is related to the Saturday afternoon broadcasts from the Metropolitan Opera, New York City. Special attention is given to building an ear repertory of operatic music heard over the radio.

Credit: 2 semester-hours

MUSIC 408. *Wagner Music Dramas*

This course deals with the operas and music dramas of Richard Wagner. It includes a study of Wagner's artistic ideals and their application to his compositions.

Credit: 2 semester-hours

MUSIC 409. *Counterpoint*

This course aims to provide a practical treatment of counterpoint for music students. It includes analysis of the works of the Sixteenth Century masters of vocal polyphony with enough of original work to insure a grasp of the principles involved.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 410. *Composition*

This course aims to develop the creative power of the student in the composition of small vocal and instrumental forms. Special attention is given to the functional aspects of composition in word setting, writing accompaniments, and improvisation.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 413. *Masters of the Symphony*

This course aims to provide the student with an understanding and appreciation of the classic and romantic symphony through the study of the symphonies of Haydn, Mozart, Beethoven, Schubert, Schumann, and Brahms.

Credit: 2 semester-hours

MUSIC 414. *Modern Symphonic Forms*

This includes a study of the post-romantic symphonies of Bruckner, Mahler, Dvorak, Franck, Tchaikowsky, and Sibelius; the symphonic poems of Strauss, Smetana, and Debussy, and the orchestral suites of Rimsky-Korsakoff, Ravel, and Stravinsky.

Credit: 2 semester-hours

MUSIC 416. *Music in Modern Society*

This course aims to interpret the nature, function, and forms of music in modern society in terms of the social, political, and cultural forces which have shaped it. It includes a study of the music of the church, royal patrons of music, nationalism in music, music and politics, music and industry, and music and entertainment. Because of the social interpretation given music, this course is particularly recommended to majors in the social studies.

Credit: 2 semester-hours

MUSIC 418. *Music of Russia*

This course provides a survey of Russian music from the Czarist regime to the modern Soviet. It aims to interpret Russian music in terms of the social, political, and cultural forces which have shaped it.

Credit: 2 semester-hours

MUSIC 420. *The Art Song*

This course provides a survey of the art song and includes a detailed study of the art songs of Beethoven, Schubert, Schumann, Brahms, Wolf, and Strauss. Special attention is given to the relation of music and poetry.

Credit: 2 semester-hours

MUSIC 422. *Chamber Music*

This course provides a survey of chamber music and includes a detailed study of the string trio, quartet, and quintet by classic, romantic, and modern composers. It includes the works of Mozart, Haydn, Beethoven, Schubert, Brahms, Debussy, Bartok, and Schoenberg. The content of this course is related to the current musical season in New York.

Credit: 2 semester-hours

MUSIC 423. *Choral Masterworks*

This course provides a survey of choral masterworks from Palestrina to Stravinsky. It includes a detailed study of Bach's *B Minor Mass*, *St. Matthew Passion*, Handel's *Messiah*, Beethoven's *Missa Solemnis*; Mendelssohn's *Elijah*; Verdi's *Requiem* and other great choral works. The content of this course is related to the current musical season in New York City.

Credit: 2 semester-hours

MUSIC 424. *A Survey of Wind Instrument Music*

This course includes music for full band, small ensembles, and solos with emphasis on literature available for brass and wood-wind players in high school. A laboratory band as well as numerous small ensemble groups are formed by members of the class so that performance of all music under consideration is possible. Special attention is given the music originally composed for wind instruments. New music from all publishers is available for examination and evaluation.

Credit: 4 semester-hours

MUSIC 425. *Music of the Romantic Period*

This course deals with the romantic spirit in music as expressed in the works of Schubert, Schumann, Mendelssohn, Chopin, Berlioz, Liszt, and others. It includes a study of program music, piano and song literature, and the rise of national schools of musical composition. Representative works are studied through performance, recordings, and radio listening. Special attention is given to parallel aspects of Romanticism in literature and the visual arts.

Credit: 2 semester-hours

MUSIC 426. *Survey of Music Literature*

This is a survey course in Music Literature and includes a study of folk song, art song, oratorio, opera, idealized dance forms, instrumental suite, sonata, symphony, and symphonic poem. Abundant use of musical illustration, directed listening, and music making acquaints the student with great masterpieces of music which should be the

possession of every generally cultured person. This course is designed for the general student and aims to make intelligent and appreciative consumers of music. It is a non-technical course and attempts to make intelligent and appreciative radio-listeners and concert goers. Special attention is given to the relation of music to English literature and the social studies.

Credit: 2 semester-hours

MUSIC 428. *Music of Twelve Great Nations*

This course aims to increase understanding among people through a study of the folk and related art music of twelve great nations. Special attention is given to the social, economic, political, and cultural backgrounds of the music of these nations. Because of the social implications of this music this course is recommended particularly to teachers of the social studies. Musical illustrations are given at the piano, through group singing, and through recordings.

Credit: 2 semester-hours

MUSIC 429. *A Cappella Choir and Choral Conducting*

This course deals with the theory and practice of the *a cappella* choir. It includes a study of the principles of group tone production, phonetics as related to singing, tuning, posture, techniques of choral conducting, interpretation, and score reading. A feature of this course is the study of a selected list of choral literature suitable for use in school, church, and community. Outstanding students are given an opportunity to conduct the College A Cappella Choir.

Prerequisite: MUSIC 301

Credit: 2 semester-hours

MUSIC 460. *Musical Studies in Europe*

This field-study course gives an opportunity to study by direct observation major European musical events of the summer season together with visits to famous places in the history of music. Beginning on July 2nd the tour extends to September 3rd covering the countries of France, Germany, Austria, Switzerland, the Netherlands, and Italy. Among many other things opportunities are provided to attend the Richard Wagner Festival in Bayreuth and the Salzburg Musical Festival and to visit the musical shrines and museums in Vienna and the LaScala Opera House and museum in Milan. Famous places such as London, Paris, Rome, Florence, Venice, Amsterdam, Frankfurt, Stuttgart, and Lucerne are included in the itinerary. Students who are registered for credit are required to present a written report at the end of the trip.

Credit: 6 semester-hours

MUSIC 499A. *Problems in the Teaching of School Music*

This is a post-student teaching course. It aims to (1) evaluate student-teaching experiences; (2) give an opportunity to the student to share with his classmates the problems encountered in student teaching and to seek a possible solution for the same; (3) meet shortages in teacher preparation not provided for in previous courses; (4) give the student a unified view of school music education before he enters the teaching field. The content of this course is determined largely by the expressed needs of the students.

Credit: 2 semester-hours

MUSIC 499B. *Workshop in School Music*

This course is designed primarily for music teachers-in-service who wish to work out projects for use in their respective schools. The content of this course is determined by needs in the field. It may include folk song dramatizations, small vocal and instrumental ensembles, the integration of music with other subjects in the curriculum, music for boys, visual aids in music pageants, festivals, and materials for special programs. This course provides the teacher with a number of units of work suitable for classroom use.

Credit: 2 semester-hours

HEALTH EDUCATION 401. *Methods and Materials in Health Education*

This course prepares the teacher to assume the responsibility for organizing and conducting a program of health instruction. The coordination of health with other subject-matter fields and the evaluation of textbooks and audio-visual materials are given special consideration.

Credit: 2 semester-hours

HEALTH EDUCATION 407. *Prevention and Care of Athletic Injuries*

This is a lecture and laboratory course designed to acquaint the student with ways to prevent and to care for the common injuries sustained in athletics.

Credit: 2 semester-hours

HEALTH EDUCATION 408. *Driver Education**Part I*

This part consists of a minimum of 40 hours of class recitations and discussions for which home reading and study have been assigned. The following topics are included: (1) history and development of driver education and training programs; (2) objectives of driver education; (3) local, state, and national traffic safety programs; (4) driver qualifications; (5) psycho-physical testing; (6) curriculum content of school courses in driver education and training; (7) construction, operation, and maintenance of automobiles; (8) traffic laws and driver licensing; (9) traffic engineering; (10) pedestrian education and protection; (11) equipment for teaching driver education; (12) liability, costs, and insurance; (13) planning driver education as a part of the daily program of the high school; (14) public relations; (15) records and reports; and (16) visual aids in teaching driver education.

Part II

This part consists of a minimum of 20 hours devoted to the following: (1) behind-the-wheel instruction; (2) demonstrations and student-teacher practice in the car; and (3) road tests in traffic. Home reading and study are required in preparation for these projects.

Prerequisite: License to drive a car with three years of driving experience with satisfactory driving record

Credit: 3 semester-hours

HEALTH EDUCATION 411. *School Health Services*

The student is familiarized with the health services available in the school. The part which the teacher plays in coordinating his activities with the school medical staff is emphasized.

Credit: 2 semester-hours

PHYSICAL EDUCATION 405. *Methods and Materials of Physical Education in the Secondary Schools*

Analysis of the program of physical education in the secondary school; criteria for the selection and grade placement of activity; consideration of method and teaching techniques; construction of teaching units and lesson plans; and problems relating to program planning, time allotment, facilities, sources of material, and program evaluation constitute the content of this course.

Credit: 2 semester-hours

PHYSICAL EDUCATION 409. *Organization and Administration of Physical Education*

The details of organizing the units of the physical education programs are discussed. Various topics, such as legislation, financing, curriculum construction, grading, excuses, plant facilities, supplies and equipment, and office management are considered.

Credit: 2 semester-hours

PHYSICAL EDUCATION 410. *Water Safety and First Aid*

This course includes intensive instruction in swimming, diving, water sports, boating, canoeing, water safety, and first aid. Students can qualify for Red Cross certificates during this course.

Credit: 2 semester-hours

THE NEW JERSEY STATE SCHOOL OF CONSERVATION

The six State Teachers Colleges, the State Department of Education, and the State Department of Conservation and Economic Development jointly operate the New Jersey State School of Conservation at Lake Wapalanne in Stokes State Forest, Sussex County. Credit for the courses given at the New Jersey State School of Conservation may be applied toward the Master's degree at the New Jersey State Teachers Colleges, subject to approval in advance by the institution concerned. Students are advised to check with their advisers relative to the application of these credits towards graduate degrees.

The following courses may be offered at the New Jersey State School of Conservation. For complete course descriptions, please refer to the departmental write-ups appearing in this bulletin. Special descriptive announcements may also be had by writing to the New Jersey State School of Conservation, Upper Montclair, New Jersey.

FINE ARTS DEPARTMENT

Fine Arts 415. *School Arts and Crafts with Native Materials*

GEOGRAPHY DEPARTMENT

Geography 420. *Field Geography and Conservation*

INDUSTRIAL ARTS DEPARTMENT

Industrial Arts 442. *Conservation of Basic Industrial Materials*

Industrial Arts 443. *The Use of Basic Industrial Materials in Industry*

INTEGRATION DEPARTMENT

Integration 440. *Camping Education*

Integration 441. *Conservation Education*

Integration 442. *Practicum in Camp Leadership*

Integration 444. *Practicum in Conservation Education*

Integration 480. *Field Science for Elementary Teachers*

Integration 539. *Guidance in the Elementary School*

HEALTH AND PHYSICAL EDUCATION DEPARTMENT

Physical Education 410. *Water Safety and First Aid*

SCIENCE DEPARTMENT

- Science 405. *Field and Laboratory Studies in Science*
- Science 411. *Problems in Field Studies in Science*
- Science 412. *Field Studies in Science: Biological*
- Science 413. *Field Studies in Science: Physical*
- Science 414. *Conservation of Plants and Animals*
- Science 415. *Conservation of Soil and Water*
- Science 419. *Field Science and Conservation*
- Science 420. *Water Supply and Conservation Problems*

SOCIAL STUDIES DEPARTMENT

- Social Studies 477. *Rural Sociology*
- Social Studies 482. *Conservation and Rural Economic Life*
- Social Studies 494. *Social Studies and Conservation*

COLLEGES FROM WHICH GRADUATE STUDENTS NOW MATRICULATED RECEIVED THEIR BACCALAUREATE DEGREE

A & T College, Greensboro, N. C.
 Bates College
 Bennett College
 Bible Baptist Seminary
 Bloomfield College
 Bob Jones University
 Boston University
 Bowling Green College, Ohio
 Bradley University
 Brooklyn College
 Brown University
 Bucknell University
 Catholic University
 Chestnut Hill College, Penna.
 College of St. Elizabeth
 Cornell University
 Drew University
 Duke University
 East Stroudsburg State Teachers
 College
 Eastern Kentucky State Teachers
 College
 Fairleigh Dickinson College
 Fordham University
 Franklin & Marshall College
 Georgetown University
 Goucher College
 Hampton Institute
 Holy Cross College
 Hood College
 Hope College
 Howard University
 Indiana State Teachers College
 Keuka College
 Lafayette College
 Lebanon Valley College
 Lehigh University
 Limestone College
 Maryville College
 Mt. Carmel College, Canada
 Muhlenberg College
 Muskingum College
 New Jersey College for Women
 New York University
 Ohio State University

Panzer College
 Pennsylvania State College
 Pratt Institute
 Rider College
 Rutgers University
 St. Bonaventure College
 St. John's University
 St. Lawrence University
 St. Peter's College
 Seton Hall University
 Smith College
 State Teachers College at Jersey City
 State Teachers College at Kutztown
 State Teachers College at Montclair
 State Teachers College at Newark
 State Teachers College at Paterson
 State Teachers College at Trenton
 State Teachers College at West
 Chester
 Swarthmore College
 Syracuse University
 Teachers College, Columbia University
 Temple University
 Tusculum College
 Union College
 University of Kentucky
 University of Maine
 University of Maryland
 University of Miami
 University of Michigan
 University of Nevada
 University of North Carolina
 University of Pennsylvania
 University of Wisconsin
 Upsala College
 Utah State Agriculture College
 Vassar College
 Wabash College
 Washington & Lee University
 Washington University
 Wesleyan University, Connecticut
 West Virginia Wesleyan
 Western Maryland College
 Wheaton College
 Yale University



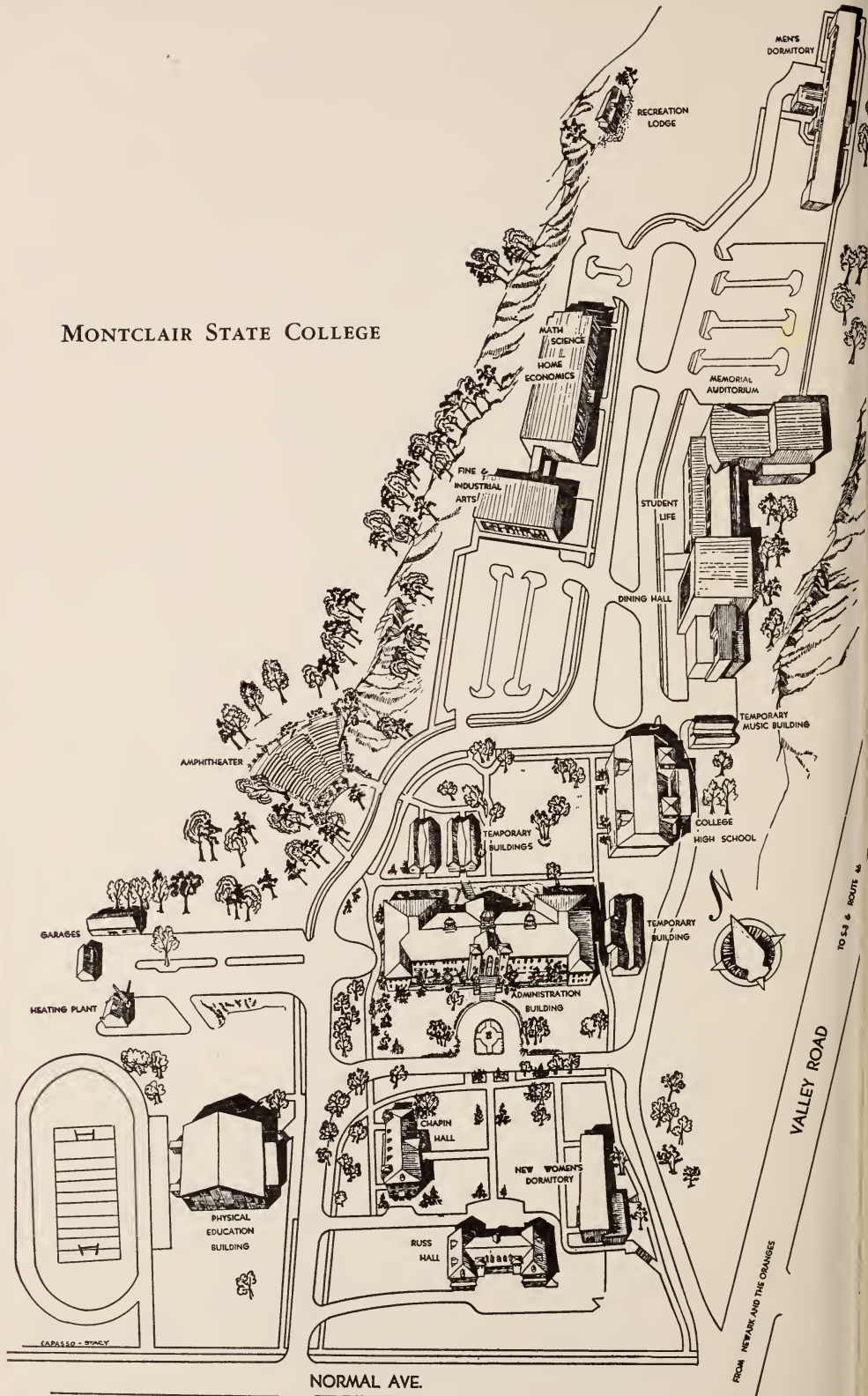
MONTCLAIR
STATE COLLEGE

GRADUATE BULLETIN
1959-1961



UPPER MONTCLAIR, NEW JERSEY

MONTCLAIR STATE COLLEGE



BULLETIN

OF

Montclair State College

GRADUATE DIVISION

MONTCLAIR STATE COLLEGE

Upper Montclair

1959

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TABLE OF CONTENTS

	<i>Page</i>
Officers of Administration	5
Graduate Faculty	6
GENERAL INFORMATION	9
History	9
Location	9
Library	10
Living Accommodations	10
Administration	10
Purposes	11
Organization	11
Certification	12
Admission and Matriculation	13
Transfer Credits	14
Student Load	15
Requirements for A. M. Degree	15
Application for Conferment of Degree	16
General Restrictions	17
Fees and Service Charges	17
The Master's Thesis and Research	18
Fields of Work	19
DEPARTMENT OF BUSINESS EDUCATION	21
DEPARTMENT OF EDUCATION	31
DEPARTMENT OF ENGLISH	51
DEPARTMENT OF FOREIGN LANGUAGES	64
DEPARTMENT OF INDUSTRIAL ARTS EDUCATION	65
DEPARTMENT OF MATHEMATICS	72
DEPARTMENT OF SCIENCE	84
DEPARTMENT OF SOCIAL STUDIES	102
DEPARTMENT OF SPEECH	128
OTHER COURSES THAT MAY BE USED AS	
ELECTIVES	140
Fine Arts	140
Geography	143
Music	148
Health Education	153
Physical Education	154
New Jersey State School of Conservation	156

ADMINISTRATION

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Commissioner of Education

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Assistant Commissioner for Higher Education

EARL E. MOSIER	Trenton
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Director of Teacher Education and Certification

ALLAN ROSEBROCK	Trenton
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Graduate Division

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JOHN J. RELAHAN	Chairman of Graduate Council
NED S. SCHROM	Dean of Students
EDWARD J. AMBRY	Director, Field Services
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PETER P. STAPAY	Registrar
BERNARD SIEGEL	Business Manager
NORMAN LANGE	Director of Student Teaching and Placement

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SAMSON McDOWELL, Jr., Ph.D.	Associate Professor of Biology
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ROBERT W. McLACHLAN, Ph.D.	Professor of Chemistry
BRUCE E. MESERVE, Ph.D.	Professor of Mathematics
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GEORGE F. PLACEK, A.M.	Associate Professor of Physical Science
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HAROLD M. SCHOLL, Ed.D.	Associate Professor of Speech
HENRY E. SCHMIDT, A.M.	Associate Professor of Physical Education
JEROME M. SEIDMAN, Ph.D.	Associate Professor of Psychology
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KENNETH O. SMITH, Ph.D.	Professor of Physics
MAX A. SOBEL, Ph.D.	Associate Professor of Mathematics
RICHARD W. TEWS, Ph.D.	Professor of Physical Education
ELIZABETH T. VANDERVEER, Ed.D.	Associate Professor of Business Education
RALPH WALTER, Ed.D.	Professor of Educational Administration
FREDERIC HAROLD YOUNG, Ph.D.	Associate Professor of English

ADJUNCT FACULTY

LEROY L. J. BOOTH, Ed.D.Guidance Director, Summit Public Schools
ABRAHAM GELFOND, Ph.D.Supervisor of Guidance, Linden Public Schools
HAROLD F. HOFFMAN, Ed.D.Superintendent of Schools, Livingston
CHARLES T. LETSON, Ed.D.Reading Consultant, Montclair Public Schools
ROBERT J. POLGLAZE, Ed.D.Vice-Principal, Bloomfield Junior High School
HARRY M. RICE, A.M.Principal, Bloomfield Senior High School
ADRIAN STRUYK, A.M.Head of Mathematics Department, Clifton High School
LAURA M. TREXLER, Ed.M.Guidance Director, Northern Valley Regional High School
J. DALE WEAVER, Ed.M.Guidance Director, Mountain Lakes

LIBRARY AND AUXILIARY SERVICES

ANNE BANKS CRIDLEBAUGH, A.M.Librarian
EDITH G. H. LENEL, Ph.D.Library Cataloger
CLAIRE M. MERLEHAN, A.M.Reference Librarian
EMMA FANTONE, A.M.Audio-Visual Education
THADDEUS J. SHEFT, A.M.Audio-Visual Education

SECRETARIAL STAFF

ROSE METZSecretary, Summer, Part-Time and Extension
Division and Graduate Division
JACQUELYN E. BLACK
Secretary, Summer, Part-Time and Extension Division

GENERAL INFORMATION

HISTORY

In 1908 Montclair State College first begun its teacher-education program as a two-year Normal School. In 1927, by act of the State Board of Education, it was changed to a State Teachers College with four-year curricula leading to a Bachelor of Arts degree and certification to teach in the secondary schools of the State. That the College might better serve teachers in service, extension courses were instituted in 1929 and summer sessions in 1930. The fact that hundreds of teachers in service registered in these programs annually shows the wisdom of the State Department in instituting them. The majority of these teachers held A.B. degrees, and they wished to continue their preparation and receive graduate credit for their work. They, therefore, requested that the College offer courses for graduate credit.

To meet this demand, the Commissioner of Education recommended and the State Board of Education voted in June, 1932, that such work be offered and the College be empowered to grant the degree of Master of Arts. Graduate courses were first offered at the State Teachers College at Montclair in the summer of 1932 and have been offered in all regular and summer sessions since.

In 1948 the Graduate Committee was formed as a sub-committee of the Administrative Council to develop programs and standards for graduate work. Since 1956 this committee has assumed greater responsibility for the conduct of the graduate program with its title changed to Graduate Council. On July 1, 1958, the title of the College was changed to Montclair State College by action of the State Board of Education.

Currently there are 1,600 students registered in the Graduate Division's various courses with approximately 700 students matriculated for the Master's degree.

LOCATION

Situated on the northern boundary of Upper Montclair, the College is approximately three miles north of the center of the town of Montclair and twelve miles east of New York City. The main entrance is at the intersection of Valley Road and Normal Avenue. Public transportation is available on the Greenwood Lake Division of the Erie Railroad and on Public Service bus routes (Nos. 60, 64, and 76 connect with the Lackawanna Railroad in the town of Montclair). Other bus lines serve the campus from New York, Newark, the Oranges, and Paterson. The junction of Highways Nos. 46 and 3 is located about one mile north of the campus. The Garden State Parkway connects with these highways close to the College.

LIBRARY

Conveniently located on the main floor of College Hall is the College Library of 83,000 volumes, with two large reading and reference rooms and three smaller reading rooms housing the music collection and the Curriculum Laboratory and Textbook Exhibit. The Textbook Exhibit of over 5,000 volumes includes the most recent textbooks in all subjects on both the elementary and secondary levels and curricula from the majority of communities and counties of New Jersey, as well as outstanding curricula from other states. Special collections include the Webster Memorial Collection of modern poetry, including many first editions and autographed copies; a collection of early science textbooks; a collection of New Jerseyiana; the Roy W. Hatch Collection of Lincolniana; and the Finley Memorial Collection of outstanding books in the field of natural history. Of special interest is the China Institute Library, a permanent loan from the China Institute of New Jersey. The library maintains a complete file of bulletins of the U. S. Office of Education for which this library is designated as an official depository library in the area. The Library is also a depository for the U. S. Census Reports. An up-to-date and widely-used file of pamphlets, maps and pictures, is available to all students.

Most of the books, including the reference collection, are on open shelves to which the students, as well as faculty, graduates, and teachers-in-service, have access and borrowing privileges. This open-shelf policy applies even to the periodical collection which consists of back issues of all but the most ephemeral of over 300 currently received periodicals. Bound volumes of magazines total over 2,500.

Supplementing the College Library is the library of the College High School which is a large, pleasant room housing 4,500 volumes and located in the College High School. These books are cataloged at the College Library and are available through the main catalog as well as through the catalog of the College High School. The High School Librarian works in close cooperation with the members of the College library staff, particularly in the field of literature for adolescents, in which an extensive and up-to-date collection is maintained.

LIVING ACCOMMODATIONS

During the Summer Session graduate students are accommodated in the dormitories. The rate for the Summer Sessions is \$18.00 a week including room, breakfast, and dinner. These charges are subject to revision.

ADMINISTRATION

The Graduate Division is the administrative unit dealing with all aspects of graduate study. Policies, regulations, and procedures which govern its various programs and courses are developed by the Graduate Council which is appointed by the President of the College.

PURPOSES

Montclair State College will continue as a professional school devoted primarily to the interests of secondary education. This objective is the controlling factor in the development of the curricula, teaching procedures, extra-curricular activities, and college spirit, and tends to unify all the activities of the college—professional, cultural, and social. The major goal of all its courses is the development of the teacher as a professional person.

Graduate courses are organized to serve the purposes of two groups of students :

Group I Those who wish to matriculate for the degree of Master of Arts: Graduates of accredited liberal arts and professional colleges. Secondary teachers, supervisors, principals, and other school administrators, who are graduates of approved colleges.

Group II Those who do not wish to matriculate for the degree: Students who hold graduate degrees but who wish to continue their professional preparation.

College graduates who wish to take courses leading toward secondary school certification.

Students who are matriculated for advanced degrees in other colleges and universities and who plan to transfer their credits.

Special students taking courses for cultural purposes without reference to credit.

Prospective students should note that graduate work consists of an integrated program of advanced, specialized study based on an undergraduate major and/or other adequate background, pre-supposing academic and personal maturity, and making more than the average demand upon the industry, initiative and scholarship of the student, since it involves responsibilities at a higher level than that characterizing the undergraduate programs.

ORGANIZATION

The work is organized to meet the needs of those who wish to do full-time work and of those who are teaching and who wish to take courses in the late afternoon, evening, or on Saturday morning. Consequently, the College now offers senior-graduate, graduate, and certification courses on campus during the late afternoon, evening, and Saturday morning, and off campus in various centers, for the convenience of those desiring professional growth through these means.

Courses of the Extension Division are also offered off campus in any community in New Jersey in which the teachers-in-service desire Montclair State College to offer a particular course and if that course appears in either the Undergraduate Catalog or the Graduate Catalog of the College. It is necessary that twenty or more students enroll in such an extension course and that the local facilities and educational resources be such as to permit the course work to meet the accepted standards of graduate instruction on campus.

Bulletins are published for the information of those who wish to attend part-time, extension, or summer session courses. Credits gained in part-time, extension, or summer session courses are accepted towards a degree or a secondary teacher's certificate. Only those students should register who are willing to meet the full requirements and take all examinations. Permission may be granted in special cases for students to take work for no credit. Other information, including bulletins, may be obtained from the Director of Field Services, Montclair State College, Upper Montclair, New Jersey.

CERTIFICATION STUDENTS

Students holding Bachelor's degrees from other colleges and desiring secondary certification should write to the Secretary of the State Board of Examiners, 175 West State Street, Trenton, New Jersey, submitting a transcript of all previous college work and requesting an evaluation as to what they are lacking in certification for some major area or areas of specialization. Once they have received this evaluation they will then be in a position to confer with the certification officer of the College in the Department of Education, who will assist them in selecting courses to meet the stated certification requirements.

CERTIFICATION STUDENTS AND STUDENT TEACHING

Graduates of other colleges who wish to do their student teaching through Montclair State College should obtain from the Education Office the mimeographed statement outlining the conditions under which it can be done. This group will be expected to meet the standards established for Montclair State College students. Students who desire to meet the State requirement in supervised student teaching must be approved by the Director of Student Teaching and must register for this experience with the Director of Field Services.

CERTIFICATION STUDENTS AND THE MASTER'S DEGREE

Students holding Bachelor's degrees from other colleges must be certified to teach in the area of their major specialization by the time the degree is conferred and should have completed their student teaching as a condition prerequisite to matriculation.

Candidates who lack some of the required courses for full limited secondary certification or certification in other professional or special subjects for both elementary and secondary schools may need to register for some undergraduate courses that will not carry graduate credit. Some of the courses that do carry graduate credit may be counted towards the limited certificate as well as towards the Master's degree. Consequently, graduate students who must meet certification requirements as well as the requirements for the Master's degree will find it necessary to spend additional time on the campus and in student teaching. Supervised student teaching, required for certification, does not carry graduate credit.

ADMISSION AND MATRICULATION FOR THE MASTER'S DEGREE

The applicant for admission must be a graduate of an accredited college or university and must present evidence of his qualifications for advanced study as shown by a high scholastic record, professional training, and experience. In addition, each department may give qualifying examinations such as the Graduate Record Aptitude Test or others which it may consider proper to determine a student's fitness to pursue graduate studies in that department.

Actual matriculation (i.e. formal and official acceptance by the Graduate Office in a program leading to the Master's degree) may be deferred sometimes for good reason until no more than eight semester-hours of graduate work have been taken. However, in the student's own interest it is strongly recommended that he determine his eligibility for matriculation before initiating a program of graduate study. In so doing he will receive proper guidance and counsel and thereby avoid the embarrassment and disappointment which can occur when non-matriculated students pursue work of their own choosing.

Steps in the matriculation process are as follows:

1. The candidate secures from the Graduate Office an application which must be completed and returned to that office.
2. The candidate will have his college send official transcripts of all undergraduate credits (if the applicant is not a graduate of Montclair), to the Chairman of the Graduate Council. Official transcripts should be on file in the Graduate Office before the time of registration for graduate courses.
3. After the application and transcripts have been received and reviewed in the Graduate Office, the candidate will be invited to confer with the Chairman of the Graduate Council.
4. The candidate will next confer with the graduate adviser in the department in which he expects to do his work, and the adviser will develop a program of courses with him.
5. The candidate will then have a final brief conference with the Chairman of the Graduate Council. Following this, the candidate will be advised in writing of the decision of the Graduate Council

and will be furnished with a statement of the work to be completed. Final action on all applicants is vested in the Graduate Council.

Registration, announcements, and procedures:

Announcements are made with the offerings of courses each semester as to when the departmental advisers and the Chairman of the Graduate Council may be consulted. At each registration the student should bring with him his most recent transcript of work taken, as well as a copy of his work program. This will identify his status and also be the basis for appropriate counseling and for a review of his progress to date.

TYPES OF ADMISSION TO THE GRADUATE DIVISION

Admission to the Graduate Division is of the following types:

1. Regular admission for fully matriculated students
2. Conditional (granted because undergraduate deficiencies exist)
3. Probational (granted for one summer or semester, to determine a student's scholastic ability)
4. Transient (granted to students not applying for a degree at this College, and expecting to transfer earned credits elsewhere)
5. Senior-Graduate (granted only to Montclair State College seniors)

Senior students currently enrolled in the College who have good academic records and who are within sixteen semester-hours of graduation may be permitted to take up to eight semester-hours of graduate work concurrently with the balance of their A.B. degree requirements and prior to graduation. Such students must have prior written permission signed by the chairman of the department concerned, the Dean of the College, and the Chairman of the Graduate Council. No graduate credit will be given retroactively for work taken in excess of degree requirements.

PROCEDURE FOR THE ADMISSION OF VETERANS

No prospective veteran student should make application for a Certificate of Eligibility until he has determined his admission status with the Graduate Office.

RESIDENCE REQUIREMENTS AND THE TRANSFER OF CREDITS

For graduates of institutions other than the New Jersey State Colleges and Rutgers University (the State University), a minimum of thirty-two semester-hours of residence work is required. To meet this residence requirement the student must attend the College as a full-time graduate student for one summer session (six semester-hours) or one regular semester. Fully employed teachers are encour-

aged to restrict the graduate work carried during the year, and to take advantage of the course offerings in the summer session when their normal professional responsibilities will not interfere with the intensive study expected of advanced students.

STUDENT LOAD

Graduate work should involve careful and intensive study with ample time to explore areas which may warrant further study.

Twelve to sixteen hours of work per semester is considered a full-time program for the graduate student in residence.

For teachers employed full time, six semester-hours of work in any one semester shall be the maximum load with four semester-hours being recommended.

In the regular six-week summer session, the maximum load shall be eight semester-hours. The Graduate Council strongly recommends that the student consider six semester-hours of work a full program.

IMPLICATIONS OF COURSE NUMBERING

Courses numbered 500-600 are open only to graduate students. Those numbered 400-499 and appearing in this catalog are open to graduate students also, and with special permission they may be taken by advanced undergraduate students who have a high scholastic average.

REQUIREMENTS FOR THE A.M. DEGREE

1. Each student selects a major field in which he must complete such courses as are prescribed and are indicated in the departmental description. To be eligible for matriculation in the major departments (with the exception of Education) a student must have a major of at least thirty semester-hours of work or its approximate equivalent in the area of specialization, and must be certified to teach the major subject in the secondary schools.

2. A minimum of thirty-two semester hours of graduate credit is required for the A.M. degree in all departments and a requirement of additional hours may be added under certain circumstances to this minimum of thirty-two semester-hours. Each major department (with the exception of Education) requires a minimum of eighteen semester-hours of graduate work in its field.

3. The programs in Education require a student to be certified to teach in New Jersey and have teaching experience as prerequisites to matriculation. The programs in this department require that twenty-four of the thirty-two total hours for the A.M. degree be in Education.

4. For graduates of teachers colleges, at least six semester-hours of the required total must be taken in the Department of Education.

EDUCATION 503, *Methods and Instruments of Research*, is required of all students matriculated in the Graduate Division and must be taken in residence.

5. In addition to EDUCATION 503, *Methods and Instruments of Research*, each candidate matriculated after August 31, 1959, will be required to complete EDUCATION 603B, *Principles and Practices of Research*, for two semester-hours, or an equivalent research seminar in the department of his major subject.

6. Four of the total credits may be satisfied by a thesis which meets the approval of the Graduate Council.

7. A candidate who is matriculated for the A.M. degree must attend as a full-time graduate student one summer session (6 semester-hours) or one regular semester.

8. An average of "B" or better is required for work submitted for the Master's degree. No credit is given for work below "C."

9. A majority of the courses taken or credits earned should be on the 500-600 level.

10. Work for the degree must be completed within five years of the date of matriculation. In case an extension of time is required, a request must be filed for such extension with the Chairman of the Graduate Council. The student's progress will be reviewed in accordance with the requirements for the A.M. degree as stated in the most recent Graduate Catalog.

A comprehensive departmental examination is required in all departments. This examination may be written and/or oral. The oral phase of the examination will be on an individual basis. The examination is given by the department in which the student does his major work at least one month before graduation time. No academic credit is given for the examination.

In some departments the thesis may be offered in place of the written comprehensive examination. Usually the oral examination is required in case a thesis or research problem is presented in lieu of the written examination.

APPLICATION FOR CONFERMENT OF DEGREE

Candidates must file with the Registrar an application for conferment of the degree before November 30 of the college year in which the work is to be completed. Application blanks for this purpose may be secured from the Registrar. The burden of responsibility for the request rests with the candidate. This is of special significance to the teacher in service who may have distributed the graduate work over four or five years. The student should note that graduation ceremonies are held in June and August. Attendance is required unless permission for graduation in absentia is granted by the President of the College.

RATING SYSTEM

Marks indicating degrees of achievement in the various courses are given in letters, A, B, C, D, and F.

- A — Excellent
- B — Good
- C — Fair
- D — Poor (No "D" credit may be counted toward the Master's degree.)
- F — Failure
- Inc. — Incomplete work
- WP — Withdrawn, passing
- WF — Withdrawn, failing

Where a student has had an unavoidable absence, or for reasons in accord with approved policy, a course may be marked "Incomplete" at the end of a semester or summer session. This mark must be removed by a final grade within eight weeks, or the course cannot be credited and the mark becomes "F" automatically.

GENERAL RESTRICTIONS

No credit is granted for:

1. Correspondence work
2. Junior-college courses
3. Graduate courses with a mark below "C"
4. Supervised student teaching
5. More than eight semester-hours of graduate credit prior to matriculation
6. The comprehensive departmental examination
7. More than six semester-hours of graduate credit earned in extension (off-campus) courses
8. Graduate work taken elsewhere unless the student is a graduate of one of the New Jersey State Colleges or the State University, and in such cases no more than eight points
9. Courses taken over ten years ago
10. Certain basic courses on the 400 level which are required for initial certification

FEES AND SERVICE CHARGES

Thirteen dollars (\$13.00) per semester-hour to residents of New Jersey and those non-residents who teach in New Jersey public schools

Fifteen dollars (\$15.00) per semester-hour to non-residents of the State of New Jersey who do not teach in New Jersey public schools

Late Registration Fee, five dollars (\$5.00)
Service charge, fifty cents (\$.50) per semester-hour
Admission fee, five dollars (\$5.00)
Program change fee, two dollars (\$2.00)
Supervised Student Teaching (if required), seventy-eight dollars (\$78.00)

Dormitory fees including room, breakfast, and dinner for a summer session, eighteen dollars (\$18.00) a week

These charges are subject to revision.

All charges are payable during the registration period.

THE MASTER'S THESIS AND RESEARCH

The writing of a Master's thesis is optional. The election to write a thesis should be considered in terms of the subject matter, the opportunities to carry out research on a standard acceptable for a thesis, and the needs of the individual in relation to his plan of graduate study.

Some departments have in effect the equivalent of a thesis requirement except for the formal filing of the complete typed thesis following standard style.

Students in the Social Studies Department complete either a Master's thesis or a Master's essay on a problem which each individual chooses for specialization. The student is then given an oral examination on the paper before a committee of members of the Social Studies Department.

All departments have research seminars which follow the basic course, EDUCATION 503, and are also designed to give the student a good foundation for thesis work. These special departmental provisions are outlined in each departmental statement of requirements.

PROCEDURE AND FORM FOR THESIS WRITING

Students writing a thesis must register with the Chairman of the Graduate Council for the course, GRADUATE 500, *Master's Thesis*, for four semester-hours, with the prior approval of their advisers.

The following information is of aid to students submitting a Master's thesis:

a. Choice of Topic and Plan of Research

The topic and plan of research will be worked out in consultation with the chairman of the student's major department. A sponsor will be appointed by the chairman of the department.

b. Presentation of Outline for Proposed Research

The outline for the proposed research for the thesis must meet the approval of the sponsor, the chairman of the department concerned, the Graduate Council, and the Dean of the College.

c. Mechanics of the Thesis

Each thesis student should be guided by William G. Campbell's *Form and Style in Thesis Writing* which may be borrowed from the Library or purchased at the College Bookstore.

d. Submitting the Thesis

A typewritten copy of the thesis must be submitted to the sponsor who, if he approves of it, will submit the thesis to a reading committee. This should be done not later than six weeks prior to the date of graduation. Any changes recommended by the reading committee must be made by the candidate. Three typewritten copies of the thesis, as finally approved, must be presented by the candidate to the chairman of his major department at least two weeks before the date of graduation. Final acceptance rests with the Graduate Council. Upon acceptance, two copies must be filed with the college librarian.

e. An acceptable thesis shall show evidence that:

1. The candidate has comprehended the essentials of his problem, followed a well-organized plan of work, and offered satisfactory solutions.
2. The candidate has made an independent and intensive study of his problem.
3. The candidate has made a comprehensive study of the literature of his subject.
4. The candidate's conclusions are justified by his findings.
5. The candidate has a practical working knowledge of research methods.
6. The thesis is not a duplicate of a similar study.
7. The data involve a sufficient fund of information to make the findings significant.
8. The thesis is of definite value to the teaching profession.

Students are expected to complete the thesis within one calendar year. An extension of time may be granted by the Chairman of the Graduate Council. If granted, the student must re-register for GRADUATE 500 on a no-credit basis and pay a fee for two (2) semester-hours. This extension will be for six calendar months.

MASTER'S DEGREE MAJOR AREAS

Majors in graduate work are offered in the fields of Administration and Supervision, Business Education, English, Industrial Arts, Mathematics, Personnel and Guidance, Science, Social Studies, and Speech.

Each curriculum provides for three areas of course work: A basic core of professional education courses on a graduate level, advanced major subject matter courses, and a group of course electives which give the student the opportunity for both breadth and depth in the area of general education. The amount of each type depends on the candidate's undergraduate work and is determined by the student's graduate adviser.

Students choosing a major field of study at the graduate level should keep in mind that certain experience requirements are needed in the fields of Administration and Supervision and Personnel and Guidance. Furthermore, enrollment in certain Education courses is limited to those who are having or who have had actual teaching experience. For details see page 31.

PROFESSIONAL AND ACADEMIC STATUS OF THE COLLEGE

Montclair State College is a fully accredited member of the Middle States Association of Colleges and Secondary Schools, and the American Association of University Women. Credits are exchangeable among colleges and universities which are members of the above regional and national associations. The National Council for the Accreditation of Teacher Education granted Full Accreditation to Montclair State College for the preparation of Elementary and Secondary school teachers, and School Service Personnel, with the Master's degree as the highest degree approved.

DEPARTMENT OF BUSINESS EDUCATION

The graduate work in the Department of Business Education is designed to prepare teachers of business education for administrative, supervisory, specialized work or master teaching in the field of business education. In order to attain these objectives the candidate has an opportunity to supplement his undergraduate program and to explore advanced areas of work in accordance with his individual background, experience, achievement, and professional needs.

Graduate work toward the Master of Arts degree in Business Education presupposes the completion of an undergraduate major in business education, or its equivalent. The undergraduate major is based on the requirements as established by the New Jersey State Board of Education. For further details see the Undergraduate Bulletin.

In lieu of four of the thirty-two semester-hours of credit required for the Master of Arts degree, the candidate may write a thesis giving the results of some study in the field of business education or its teaching. This study may be made only after consultation with the Chairman of the Business Education Department. Plans should be made to have such a study in its final form and approved by the Department of Business Education by May 1st of the year in which the degree is expected to be conferred.

All candidates for the Master of Arts degree in Business Education must pass a comprehensive examination before they are granted the degree. This examination is given the first Saturday in April and the last Saturday in July for those candidates anticipating graduation. It is general in nature and is intended to test the candidate's maturity of thought with respect to business education.

GRADUATE PROGRAM OF STUDIES

MASTER OF ARTS DEGREE IN BUSINESS EDUCATION

Division I. Required Integration Department Courses (6 s. h. required)

Ed. 503.	Methods and Instruments of Research	2 s. h.
Ed. 500A.	Basic Educational Trends	2 s. h.
Elective	To be chosen on recommendation and approval of the Chairman of the Department of Business Education	2 s. h.

Division II. Research Seminar, Field Work and Thesis (8 to 10 s. h.)

B. E. 501A + B.	Research Seminar in Business Education (required of all candidates)	4 s. h.
Graduate 500.	Thesis*	4 s. h.
B. E. 532.	Field Studies and Audio-Visual Aids in Business Education	
	or	4 s. h.
B. E. 533.	Supervised Work Experience and Seminar	

*Division III. Required Business Professional Courses**Group A—(4 s. h. required)*

B. E. 502.	Principles and Problems of Business Education	2 s. h.
B. E. 503.	The Business Education Curriculum	2 s. h.
B. E. 504.	Administration and Supervision of Business Education	2 s. h.
B. E. 505.	Tests and Measurements in Business Education	2 s. h.

Group B—(4 s. h. required)

B. E. 520.	Improvement of Instruction in Business Education	
Part A.	General Business Subjects	2 s. h.
Part B.	Bookkeeping, Accounting, and Business Arithmetic	2 s. h.
Part C.	Secretarial Subjects	2 s. h.
Either part may be elected separately. A minimum of two parts must be completed.		

Division IV. Elective Subject-Matter Courses

(8 to 10 s. h. required—dependent on the total accumulated in Division II—to be selected after consultation with the Chairman of the Department of Business Education.)

* Students writing a thesis will take B. E. 501A and will substitute four (4) semester-hours for the thesis in place of B. E. 501B. This will count as a total of six (6) semester-hours in research and thesis.

THE GRADUATE COURSES

BUSINESS EDUCATION 501A AND B. *Research Seminar in Business Education*

This course deals with research and literature in the field of business education. The emphasis is placed on making the classroom teacher an intelligent consumer of the current research findings and publications related to business education.

Credit: 4 semester-hours

BUSINESS EDUCATION 502. *Principles and Problems of Business Education*

The purpose of this course is to survey the basic principles and practices of business education. Among the topics considered are: history of the high school business program, purposes, attitudes of management and labor toward education, the relationship of general education to business education, and trends in the field.

Credit: 2 semester-hours

BUSINESS EDUCATION 503. *The Business Education Curriculum*

This course is a sequel to BUSINESS EDUCATION 502 which should be completed as a prerequisite. It deals with the curricula in business education for various levels and types of schools. In this course, the student learns how to evaluate present programs and to make recommendations for needed changes.

Credit: 2 semester-hours

BUSINESS EDUCATION 504. *Administration and Supervision of Business Education*

This course offers an opportunity to study the problems of organizing, directing, and supervising business education programs. Such matters as the functions of the administrator and supervisor of business education, textbook selection, teacher selection, testing programs, conferences, and equipment and layout are considered.

Credit: 2 semester-hours

BUSINESS EDUCATION 505. *Tests and Measurements in Business Education*

This course deals with constructing, administering, interpreting, and evaluating all types of testing materials in business subjects.

Credit: 2 semester-hours

BUSINESS EDUCATION 516. *Business Organization and Management II*

The problem approach is used in this advanced course in considering such topics as business ownership, finances, location and layouts, purchasing personnel, and managerial controls.

Credit: 2 semester-hours

BUSINESS EDUCATION 518. *Advertising II*

This advanced course in advertising offers an opportunity to study in some detail the uses of various advertising media such as newspapers, magazines, radio, television, and direct mail, and to evaluate their effectiveness in terms of campaigns.

Credit: 2 semester-hours

BUSINESS EDUCATION 520A, B, C. *Improvement of Instruction in Business Education*

This course gives the experienced business teacher an opportunity to study the content, methods, teaching aids, and evaluation procedures in at least two * of the three specialized fields:

BUS. ED. 520A.* *General Business Subjects*

Credit: 2 semester-hours

BUS. ED. 520B.* *Bookkeeping, Accounting, and Business Arithmetic*

Credit: 2 semester-hours

BUS. ED. 520C.* *Secretarial Subjects*

Credit: 2 semester-hours

Note: A minimum of two (2) parts of Bus. Ed. 520 must be completed.

BUSINESS EDUCATION 532. *Field Studies and Audio-Visual Aids in Business Education*

This course gives the classroom teacher an opportunity to visit and evaluate some of the practices of many business offices, industries, and retailing organizations located in the metropolitan area. It also provides for a study of the many audio and visual aids available for use in business classes.

Credit: 4 semester-hours

BUSINESS EDUCATION 533. *Supervised Work Experience and Seminar*

The graduate student who has not had extensive business experience has an opportunity to work full-time for six weeks during the summer in a business position under College supervision. An evening conference is held weekly to discuss problems related to the work experience program.

Credit: 4 semester-hours

BUSINESS EDUCATION 540. *Auditing*

This course seeks to develop the meaning and techniques of auditing procedure. It includes practice in the fundamental mechanics of auditing as well as in the making of the formal report on an audit.

Prerequisite: 8 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 541. *Tax Accounting*

The primary purpose of this course is to give a comprehensive picture of the Federal Tax structure, and to provide training in the application of basic principles to specific problems of the individual and corporation.

Prerequisite: 6 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 542A. *Advanced Business Law Cases I*

This course presupposes a knowledge of the basic principles of business law. It is designed to furnish a broader understanding and background in areas requiring considerable training to be effective in the classroom. Cases are concerned with the topics of contracts, negotiable instruments, and insurance.

Credit: 2 semester-hours

BUSINESS EDUCATION 542B. *Advanced Business Law Cases II*

This advanced law course is a continuation of Bus. Ed. 542A, but course 542A is not a prerequisite. A basic knowledge of the principles of law is, however, required. The course includes a further study of law cases pertaining to bailments, carriers, sales, property, landlord and tenant, torts, and business crimes.

Credit: 2 semester-hours

BUSINESS EDUCATION 543A. *Advanced Accounting I*

The content of this course emphasizes an intensive study of the items making up accounting statements and the principles of valuation and income determination. Problem solving is an integral part of the course. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 543B. *Advanced Accounting II*

This course is a continuation of Bus. Ed. 543A, but course 543A is not a prerequisite. Topics treated include consignments, agency and branch accounting, consolidations, receivership accounting, estate and trust accounting. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 544A, B, C, D. *Workshops in Secretarial and Clerical Practice, Advanced Stenography, Typewriting, Office Machines*

These workshops which run simultaneously when the class is small provide an opportunity for the study, planning, and development of teaching materials and projects fitted to the particular situation in which the person is teaching. The workshops are held in the office-practice room where equipment and reference materials are available. Instruction is on an individual and small-group basis with occasional seminar meetings of the entire group. This is a class where ideas forced to lie dormant during the busy school year may be brought to fruition. There is complete freedom to experiment on individual teaching problems.

Credit: 2 semester-hours each

SENIOR GRADUATE COURSES

The following courses are not required for the Master's degree in Business Education. With the approval of the Chairman of the Department, they may be used as elective credits.

BUSINESS EDUCATION 401B. *Methods of Teaching Bookkeeping and Accounting*

A brief study is made of the history and development of book-keeping instruction and materials, and aims and objectives in the light of current trends. Special attention is given to the problems of textbook selection, lesson planning, classroom and teaching procedures, tests and measurements, audio-visual and other teaching aids. Opportunities are given students to present lessons for criticism and evaluation. A test of subject-matter competency is required.

Prerequisite: 12 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 401C. *Methods of Teaching Secretarial Studies*

Techniques of teaching beginning stenography, advanced dictation and transcription, secretarial training, and clerical practice are provided in this course. Attention is given to the latest teaching materials, audio-visual aids, equipment, and supplies.

Teaching the skills of the clerical and secretarial worker is stressed; in addition, the traits, attitudes, work habits, and understandings which, if developed, permit an office worker to make a real contribution to the business world and to society are analyzed. The unique opportunities present in the preparation of the secretarial worker for service to the school and to the community are surveyed. A test of subject-matter competency in each field is required.

Credit: 2 semester-hours

BUSINESS EDUCATION 403. *Advanced Dictation and Transcription, II*

This course is designed for the teacher of stenography and transcription who wishes to study the problems of dictation and transcription from the viewpoint of his own class situation and also to improve his skill.

Those who take this course should have had a methods course in stenography and have had at least student-teaching experience.

Credit: 2 semester-hours

BUSINESS EDUCATION 404. *Business Economics*

This course deals with the business aspects of economics as related to immediate and long-range post-war problems; operation and government control of public utilities; taxation, government finance, and labor and management problems.

Credit: 2 semester-hours

BUSINESS EDUCATION 405. *Office Practice—Clerical*

Office machines commonly used by the bookkeeper and clerical worker are studied in this course. Actual training is given on the 10-key and full keyboard adding listing machines, the rotary and key-driven calculating machines, and the posting machine. Other office skills necessary for the clerical worker to possess are stressed. Limited instruction is provided on the voice-writing and duplicating equipment.

Techniques of job analysis, including job description, job breakdown, and job evaluation are practiced.

Credit: 3 semester-hours

BUSINESS EDUCATION 406. *Advertising, I*

This course aims to acquaint the student with the social and economic aspects of advertising so that a fair evaluation may be made of its worth as well as its undesirable aspects. Copy appeals, the writing of copy, advertising layouts, and the selection of appropriate types of media for various advertisements are considered. Emphasis is placed on the research aspects of the subject so important today.

Credit: 2 semester-hours

BUSINESS EDUCATION 407. *Office Practice—Secretarial*

The secretary must be acquainted with office procedure and must be able to operate many different office machines. This course familiarizes the prospective teacher of secretaries with the operation of voice-writing and duplicating equipment. The duties of the secretarial worker are studied, with considerable attention being paid to filing. Understanding of office procedures and stenographic skill are strengthened through supervised office assignments and class work projects.

Credit: 3 semester-hours

BUSINESS EDUCATION 408. *Business Finance*

This course deals with the processes involved in the financing of business organizations from the time of their inception and promotion, during operation and expansion, and during the period of reorganization. Problems involving financing by means of stock, borrowed capital, mortgages, bonds, and notes are solved.

Credit: 3 semester-hours

BUSINESS EDUCATION 409. *Consumer Education*

Consideration is given to the role of the consumer in the economy, some of the forces affecting consumer demand, governmental and private agencies aiding the consumer, and the development of intelligent techniques for buying and using consumer goods and services.

Credit: 3 semester-hours

BUSINESS EDUCATION 410. *Advanced Accounting*

This is an advanced course for students who have had two years of accounting. Emphasis is placed on techniques of problem solving. Included are problems relating to basic accounting principles, cost accounting, and intermediate accounting. Considered are the determination of net income on accrual, cash and installment bases; problems of valuation, including problems of depreciation, depletion, and amortization; consignments; preparation and analysis of financial statements, including analysis of net change in gross profit and net change in working capital; partnership formation, operation, dissolution, and liquidation; bankruptcy, reorganization, and recapitalization, and consolidated balance sheets and income statements.

Prerequisites: BUSINESS EDUCATION 201, BUSINESS EDUCATION 202, BUSINESS EDUCATION 301, BUSINESS EDUCATION 302

Credit: 2 semester-hours

BUSINESS EDUCATION 411. *Tax Accounting*

The purpose of this course is to give a comprehensive picture of the Federal Tax structure. Extensive training is provided in the application of basic principles to the specific problems of the individual. All forms involved in the filing of individual tax returns are carefully studied. Opportunity is provided for the student to master the problems encountered in completing individual tax returns.

Prerequisite: 12 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 412. *Project Development in Consumer Education*

This course permits the student to explore in a specialized fashion two major areas of consumer education. Two projects are developed, one on housing and the other on the furnishing of a home. The basic purposes of this course are to illustrate the handling of material and the procedures that might be used in developing other consumer education units.

Prerequisite: An undergraduate course in consumer education or economics

Credit: 2 semester-hours

BUSINESS EDUCATION 414. *Merchandising, I*

This course analyzes the problems of how, what, where, and when to buy; the terms of purchasing; tested receiving and marketing procedures; the mathematics of merchandising—setting the retail price, planning mark-up and mark-down; and inventory controls. It is designed to assist the teacher of the prospective or actual small businessman.

Credit: 2 semester-hours

BUSINESS EDUCATION 417. *Marketing*

Marketing is the process of transferring goods from the producer to the consumer. The functions involved in the process, the various channels of distribution, marketing institutions, and the costs of marketing are considered in this course. Such topics as auctions, produce exchanges, wholesalers, retailing, department and mail-order stores, chain stores, cooperatives, profits, and prices are included.

Credit: 2 semester-hours

BUSINESS EDUCATION 418. *Retail Store Management*

The work of the store manager in retail store operation is fully explored in this course. The problems of organization and management as they are encountered in various types of retail stores are discussed. Consideration is given to trends, principles, and practices in small and large stores in both the independent and chain-store fields.

Credit: 2 semester-hours

BUSINESS EDUCATION 420. *Field Studies in Business Education*

This orientation course aims to introduce business-education students, through direct observational techniques, to the realities of the business world. Six field trips are made in the New York Metropolitan Area which include visits to business organizations where the following types of business activity or relationships may be observed: production; merchandising and advertising; finance; transportation and communication; employer-employee relationships; government and business relationships. The field trips are supplemented by regular class sessions where discussions are held and visual aids presented to make the visits more meaningful.

Credit: 2 semester-hours

BUSINESS EDUCATION 421. *Finance and Investments for Families*

This course applies the principles of budgeting, banking, insurance, finance, and investments to the complicated problems facing individuals and families in these areas. It deals with budgets; savings; banking; life insurance; general insurance annuities; pensions; wills; such investments as stocks, bonds, and mutual funds; homes; and small business enterprises.

Credit: 2 semester-hours

DEPARTMENT OF EDUCATION

Graduate courses in this department meet one or more of three needs: (1) instruction in the Administration and Supervision major leading to the A.M. degree and New Jersey certification for one or more of the positions of Subject Supervisor, General Secondary Supervisor, and Secondary School Principal; (2) instruction in the Personnel and Guidance major leading to the A.M. degree and New Jersey certification in guidance; and (3) advanced professional instruction for administrators, supervisors, counselors, and classroom teachers.

In pursuit of the above objectives most graduate courses in the Education Department are designed for students with teaching experience. Other graduate courses presuppose at least a teaching certificate.

Graduate students who do not hold teaching certificates will enroll in undergraduate and senior-graduate (400 level) courses in order to meet certification requirements. If an insufficient number of these courses is being offered, these uncertificated graduate students may also enroll, with the approval of the Chairman of the Education Department, in the following graduate courses in the Education Department: 500B, 500C, 505, 520, 550, 551.

Graduate students working toward an A.M. degree in Administration and Supervision are required to have at least two years of teaching experience before matriculation; those majoring in Personnel and Guidance are required to have at least two years of teaching experience before the degree will be conferred.

Students who plan to remain classroom teachers are not encouraged to seek an A.M. degree in either Administration and Supervision or Personnel and Guidance.

Courses in the teaching of elementary-school subjects are open only to regular Montclair State College undergraduates or to holders of the A.B. degree from the Montclair State College.

I. COURSE REQUIREMENTS FOR THE A.M. DEGREE IN ADMINISTRATION AND SUPERVISION

- A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience completed prior to matriculation. Not more than eight semester-hours of work taken prior to matriculation may be counted toward this degree.
- B. Graduates of New Jersey State Colleges and Rutgers, The State University, may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Program Adviser and the Chairman of the Graduate Council.

- C. Satisfactory completion of not fewer than thirty-two semester-hours of work as follows: (In exceptional cases appropriate substitutions or changes may be made in these requirements upon approval by the Program Adviser.)

1. Required Courses—18 semester-hours S. H.

Ed. 500D.	<i>School Administration I: Functions and Organization</i>	2
Ed. 500E.	<i>School Administration II: Law and Finance</i>	2
Ed. 500F.	<i>School Administration III: Community Relations</i>	2
Ed. 502.	<i>Organization and Administration of the Modern High School</i>	2
Ed. 503.	<i>Methods and Instruments of Research</i>	2
Ed. 504A.	<i>Curriculum Construction in the Secondary School</i>	2
or		
Ed. 553.	<i>Core-Curriculum and Life-Adjustment Programs in High Schools</i>	
Ed. 505.	<i>Organization and Administration of Extra-Curricular Activities</i>	2
Ed. 508.	<i>Supervision of Instruction in Secondary Schools</i>	2
Ed. 551.	<i>Principles and Techniques of Guidance</i>	2

2. Education Department Electives (8 semester-hours)

The student, with his adviser's approval, will select eight semester-hours in additional Education Department courses numbered 406 or above.

3. Electives in Other Departments (6 semester-hours)

The student, with his adviser's approval, will select six semester-hours of course work in other departments. It is intended that the electives chosen shall be of a liberal-cultural orientation selected to broaden the student's interests and background.

II. COURSE REQUIREMENTS FOR THE A. M. DEGREE IN PERSONNEL AND GUIDANCE

- A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience. One year of this experience must be completed prior to matriculation. (Not more than eight semester-hours will be counted toward this degree prior to the obtaining of this certificate and the beginning of this experience.)

B. Satisfactory completion of not fewer than 32 semester-hours as follows:

	1. Basic Requirements (Total of 20 semester-hours) S. H.	
either	Ed. 500B. <i>Advanced Educational Psychology</i>	2
or	Ed. 550. <i>Child and Adolescent Development</i>	
	Ed. 500F. <i>School Administration III, Community Relations</i>	2
	Ed. 503. <i>Methods and Instruments of Research</i>	2
	Ed. 520. <i>Principles of Mental Hygiene</i>	2
	Ed. 521A. <i>Educational and Psychological Measurement in Guidance</i>	2
	Ed. 535. <i>Vocational Guidance</i>	2
	Ed. 536. <i>Educational Guidance</i>	2
	Ed. 537. <i>Social-Moral Guidance</i>	2
	Ed. 538. <i>Group Guidance and Counseling Activities</i>	2
	Ed. 551. <i>Principles and Techniques of Guidance</i>	2

2. Primary Electives (Minimum of 4 semester-hours required)		
Ed. 602.	<i>Seminar in Guidance</i>	4
Ed. 505.	<i>Organization and Administration of Extra-Curricular Activities</i>	2
Ed. 530A.	<i>Corrective and Remedial Reading in Secondary Schools</i>	2
Ed. 521B.	<i>Psychological Tests in Guidance Programs</i>	2
Speech 466.	<i>Speech Development: Improvement and Re-education</i>	2
3. Secondary Electives (Maximum of 8 semester-hours permitted)		
Courses in related and unrelated subjects in other departments of the College		
Soc. St. 439.	<i>The Family and Its Problems</i>	2
Soc. St. 443.	<i>Youth and the Community</i>	2
Soc. St. 444.	<i>The Social Bases of Human Relations</i>	2
Soc. St. 450.	<i>Modern Economic Problems</i>	4
Speech 464.	<i>Psychology of Oral Communication</i>	2
Ed. 409.	<i>Radio and Sound Equipment in the Classroom</i>	2
OR any other courses in the graduate program		
Total		32

NOTE:

1. Graduates from New Jersey State Colleges may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Chairman of the Graduate Council.

GRADUATE COURSES

EDUCATION 500A. *Basic Educational Trends*

This course deals with a study of those concepts or principles which have gradually emerged from the mass of educational theory, practice, and research to a point where they have been generally validated and accepted. Such a study is intended as a summarization aimed at achieving a better perspective of the relationship of specific items to the total educational pattern.

Credit: 2 semester-hours

EDUCATION 500B. *Advanced Educational Psychology*

The course covers the various aspects of growth. Individual differences, their measurement, and their bearing on educational practices and principles furnish topics of study and discussion. Principles and laws of learning are reviewed. Some time is given to problems of personality as encountered in school work. The several points of view which have been prominent in the psychology of the past fifty to seventy-five years are examined for their contributions to thinking about human nature.

Prerequisite: An introductory course in psychology

Credit: 2 semester-hours

EDUCATION 500C. *Recent Trends in Secondary School Methods*

This course emphasizes the fundamental principles underlying the technique of teaching on the secondary school level. Some of the topics considered are: organization of knowledge, the logical and psychological aspects of method, developing appreciations, social-moral education, teaching motor control, fixing motor responses, books and verbalism, meeting individual differences, guidance in study, tests and examinations, marks and marking.

Credit: 2 semester-hours

EDUCATION 500D. *School Administration I: Functions and Organization*

This is the basic course in the organization and administration of the American school system at the national, state, intermediate, and local levels. The purposes and nature of school administration are studied. Other topics considered include: the superintendency, personnel problems, records and reports, plant administration, business administration, auxiliary services, administration of curriculum, instruction, guidance, and pupil personnel.

Credit: 2 semester-hours

EDUCATION 500E. *School Administration: Law and Finance*

This course acquaints the student with the allied fields of school law and school finance, with special reference to New Jersey. The topics studied include: a unit on the current economic environment, State and local taxation, State aid theory and practice, school district indebtedness, the budgetary process, legal theory, the relationship of school government to other governments, the judicial functions of the State Commissioner of Education and the State Board of Education, and the rights and duties of school boards and officials and employees. Students who have had EDUCATION 506, *School Law*, and/or EDUCATION 507, *School Finance*, are not permitted to take EDUCATION 500E.

Credit: 2 semester-hours

EDUCATION 500F. *School Administration III: Community Relations*

This course concerns the relation of the school to other educational efforts of the community. It considers the scope and types of agencies and informal influences of an educational nature, and also the agencies and methods by which the best total co-operative effort can be attained. It deals also with methods and plans of publicity. Constant reference throughout is made to New Jersey localities.

Credit: 2 semester-hours

EDUCATION 502. *Organization and Administration of the Modern High School*

The following topics are considered: the student personnel, building and revising the high school curriculum, providing for individual differences, making the school schedule, records, the guidance program, pupil participation in government, the extra-curricular program, the health program, the safety program, discipline, library and study hall, cafeteria, the principal's office, and evaluating results.

Prerequisite: EDUCATION 500D or equivalent

Credit: 2 semester-hours

EDUCATION 503. *Methods and Instruments of Research*

This course is required of and restricted to all regularly matriculated candidates for the Master's degree without regard to their field of major interest. Its purpose is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student sets up a problem and plans and carries out its solution. It is recommended that this course be taken rather early in the graduate program and precede work in departmental seminar or research courses.

Prerequisite: MATHEMATICS 400 or equivalent

Credit: 2 semester-hours

EDUCATION 504A. *Curriculum Construction in the Secondary School*

The purpose of this course is to introduce the student to constructive criticism of American culture, to consider the extent to which the secondary school curriculum meets the needs of a changing civilization, and to consider effective means of curriculum construction.

Credit: 2 semester-hours

EDUCATION 504B. *Seminar in Curriculum Organization*

This course is for students actively engaged in problems of curriculum reconstruction and those who are anticipating committee work in this field. It concerns both the elementary and secondary levels. This represents advanced work which depends on previous study in the curriculum area. EDUCATION 504A, EDUCATION 548, or EDUCATION 553 is prerequisite to this course.

Credit: 2 semester-hours

EDUCATION 505. *Organization and Administration of Extra-Curricular Activities*

The first part of this course considers such general problems of extra-curricular activities as: their growing importance; their relation to the curriculum; the principles underlying their organization, administration, and supervision; and methods of financing. In the second part, an intensive study is made of the home room, the assembly, the student council, clubs, athletics, school publications, and other activities in which the class is especially interested.

Credit: 2 semester-hours

EDUCATION 506. *School Law*

After an introductory general study of such topics as: legal theory, the separation of school government from other local government, the appellate function of the State Commissioner of Education and the State Board of Education, the course is concerned principally with a study of New Jersey school laws (Title 18 of the Revised Statutes) and decisions. Students who have taken EDUCATION 500E, *School Administration II: Law and Finance*, for credit are not permitted to take either EDUCATION 506 or EDUCATION 507. EDUCATION 506 and EDUCATION 507 may be substituted for the required course, EDUCATION 500E, in the graduate program in Administration and Supervision.

Credit: 2 semester-hours

EDUCATION 507. *School Finance*

After an introductory unit concerned with the current economic environment, this course is devoted to a study of state and local taxation, state school-aid theory and practice, school-district indebtedness, cost-quality relationships, Federal aid, fiscal controls, and the budgetary process. Students who have taken EDUCATION 500E, *School Administration II: Law and Finance*, for credit are not permitted to take either EDUCATION 506 or EDUCATION 507. EDUCATION 506 and EDUCATION 507 may be substituted for the required course, EDUCATION 500E, in the graduate program in Administration and Supervision.

Credit: 2 semester-hours

EDUCATION 508. *Supervision of Instruction in Secondary Schools*

This course emphasizes the more practical phases of supervision which are met most frequently by those engaged in it. Among the topics are: the set-up for adequate supervision, supervision as encouraging and guiding the growth of teachers and the improvement of educational procedures, the supervisory functions of teachers' meet-

ings, discussion groups, general and professional reading, the writing of articles, co-operative curriculum modification, utilization of community resources, and teacher intervisitation.

Credit: 2 semester-hours

EDUCATION 509. *Secondary School Building Planning*

This course deals with the educational planning of secondary-school buildings. The preparation of educational specifications and space requirements is considered. Topics considered include the planning of offices, classrooms, auditoriums, gymnasiums, laboratories, shops, libraries, cafeterias, and other spaces.

Prerequisites: EDUCATION 502 and EDUCATION 504A or equivalent

Credit: 2 semester-hours

EDUCATION 510. *Seminar in Secondary Administration and Supervision*

In this course the class makes an intensive study of administrative and supervisory problems suggested by the educational events and trends of the year, by the interests and responsibilities of the members of the class, and by educational movements in New Jersey and the country. Each student does an individual piece of research which he reports to the class. This represents advanced work which depends upon previous study or experience in educational administration or supervision. (Prerequisites: EDUCATION 502 or 601A, and 508 or 601B.)

Credit: 2 semester-hours

EDUCATION 520. *Principles of Mental Hygiene*

This course is designed to be a general survey of the principles and practices of mental health with special reference to the mental health of teacher and pupil. It involves a thorough grounding in fundamental principles of mental hygiene with much practical consideration of the mental-health values of instructional programs and procedures. Discussion centers on practical efforts to develop wholesome personalities in our schools.

Credit: 2 semester-hours

EDUCATION 521A. *Educational and Psychological Measurement in Guidance*

This course deals with fundamentals of educational and psychological measurements in guidance: test theory, statistical concepts, test construction, evaluation, and interpretation. The place of tests in the instructional program is stressed.

Prerequisite: This course is open only to those with teaching experience.

Credit: 2 semester-hours

EDUCATION 521B. *Psychological Tests in Guidance Programs*

This course is designed to familiarize the student with various psychological tests and scales that may be used in guidance programs in the secondary school. The student is given practice in administering many types of group tests. This includes scoring the tests and evaluating the results, with a discussion of ways in which these results may be used. Much time is spent in actual laboratory demonstrations of tests, giving students an opportunity to serve as subjects and as examiners. Class discussion is based upon first-hand information gained through use of the tests, on readings, and on class reports.

Prerequisite: EDUCATION 521A

Credit: 2 semester-hours

EDUCATION 529. *Field Work in Guidance*

The aim of the course is to introduce the student to various aspects of guidance through experience in agencies actually dealing with such problems. Students observe and participate in activities of the agencies to which they are assigned and write full accounts of these observations and experiences. Some time is spent in discussing and evaluating these experiences and relating them to the literature of the subject. Prerequisites are: experience in teaching; familiarity with the literature on all aspects of guidance and mental hygiene; and EDUCATION 500B, 520, and 551. This work is conducted by seminar and individual guidance. The hours for the conferences are arranged personally by student and instructor.

Credit: 4 semester-hours

EDUCATION 530A. *Corrective and Remedial Reading in Secondary Schools*

This course offers an investigation and interpretation of the reading problems which are found in secondary school classes. A study is made of the causes of reading difficulties, methods of diagnosis, and techniques of remedial and corrective teaching. Particular attention is given to the selection and adaptation of suitable curriculum materials. Guidance is given to teachers with individual case problems of retarded, normal, and superior pupils. Illustrative material is taken from case studies developed by classroom teachers.

Credit: 2 semester-hours

EDUCATION 530B. *Workshop in Corrective and Remedial Reading in Secondary Schools*

This course is designed for students who are directing or instituting programs of remedial and corrective reading and for those who are teaching individuals and classes in such programs. For the most part

each student works intensively on his own teaching problem, receiving suggestions and recommendations as the work progresses. Some topics of common interest are: diagnosis, remediation, evaluation, organization and administration of reading programs; use and cost of materials and equipment; relation to the rest of the educational program of the school.

Prerequisite: EDUCATION 530A or the equivalent, or considerable experience in remedial work

Credit: 2 semester-hours

EDUCATION 532. *The Supervision and Teaching of Reading in Elementary Schools*

The place of reading in the entire elementary school program is analyzed. Attention is given to necessary remedial work for junior high school students. Materials and their use in instructional programs are studied with a view toward increasing power. All growth levels are considered. Good first teaching is of primary concern; however, the analysis and correction of certain reading difficulties constitute an important portion of the course.

Credit: 2 semester-hours

EDUCATION 534. *Community Resources for Guidance*

This course deals with the various agencies, industries, and institutions available in the surrounding communities for use in guiding students. In addition to becoming familiar with the location and nature of these facilities students learn the techniques for arranging student interviews and visits. Class discussion and personal research are supplemented by field trips.

Credit: 2 semester-hours

EDUCATION 535. *Vocational Guidance*

This course is intended for counselors in the junior and senior high schools to obtain information about the principles and philosophy of vocational education and the techniques of counseling youths who wish to receive pre-employment training, and for counselors of out-of-school groups who are attempting to make readjustments to occupational life. Attention is also given to guidance techniques for job preparation and readjustment, the matching of educational and personal abilities to job specifications, the effects of social legislation on the employment of youths, and a study of techniques used in determining occupational needs and occupational changes.

Credit: 2 semester-hours

EDUCATION 536. *Educational Guidance*

This course is concerned with the facilities available for education after high-school graduation, the problem of further training for pupils leaving school before completing high school, and the academic problems of students while in school. A brief survey of colleges and college-admission procedures is made.

Credit: 2 semester-hours

EDUCATION 537. *Social-Moral Guidance*

This course is concerned with the non-vocational and non-academic personal and social problems of pupils as well as with the development of techniques by which counselors can integrate the pupil's personal life with the mores and customs of society. It also includes a study of the possible services of various community agencies and a study of the counselor's relation to problems of discipline and citizenship education.

Credit: 2 semester-hours

EDUCATION 538. *Group Guidance and Counseling Activities*

This course is concerned with the various techniques for helping individual pupils and for using group activities including role-playing as a guidance technique. The group activities considered include those of home rooms, activity periods, occupation courses, student field trips, placement follow-ups, college nights, and career days.

Credit: 2 semester-hours

EDUCATION 539. *Elementary School Guidance Services*

This course is designed for guidance counselors in the public schools with particular emphasis on the guidance services that may be offered in grades kindergarten through six. The guidance program, as established in the public schools, envisions supervision and administration of the guidance program from the kindergarten through graduation at grade twelve. It is important, therefore, that the guidance director understands the services that can be made available to the elementary school.

Prerequisite: EDUCATION 551

Credit: 2 semester-hours

EDUCATION 540. *Recreational and Activity Leadership*

It is the aim of the course to furnish each student with practical skills that are of service in dealing with young people of high school age. The practical side is supplemented by a thorough consideration of source material and theory. A partial list of the areas covered in the course follows: how to organize and handle groups, the use of

leaders from within the group, indoor games, outdoor games, special hikes, outdoor cooking, camp-fire leadership. Special field trips are provided to observe camps and playgrounds in operation.

Credit: 2 semester-hours

EDUCATION 548. *Curriculum Construction in the Elementary School*

This course offers an opportunity to review state and city elementary curricula; to discuss the principles of curriculum construction; to collect new teaching materials for the various subjects; and to evaluate, organize, and grade these materials. Teaching procedures in the use of materials are discussed and evaluated in terms of pupil needs, the objectives set up, and the results obtained. This course offers an opportunity to make a special study of the materials and procedures to be used in the supervision of the language arts.

Credit: 2 semester-hours

EDUCATION 550. *Child and Adolescent Development*

This course reviews the general characteristics of child and adolescent development: motor and physiological, social, emotional, language, intellectual, and interests and ideals. The influences of home, school, community, and institutional life on child and adolescent development are considered as well as problems of guidance presented by children in the normal course of development and also those presented by deviations from the normal course.

Credit: 2 semester-hours

EDUCATION 551. *Principles and Techniques of Guidance*

Topics included in this course cover: philosophy of guidance, history of the guidance movement, the need for guidance presented by children and adolescents. The methods of gathering useful data are studied, and school records, exploratory activities, tests, inventories, the case study approach, occupational information, and occupational data are treated as well as general methods of guidance with special stress on interviewing and counseling of students.

Credit: 2 semester-hours

EDUCATION 552. *The Junior College Curriculum*

This course considers admission requirements, required and elective courses, course contents, and supplementary extra-curricular and guidance activities of the junior college. As a background for a consideration of the principles underlying junior college curricula, there is a brief treatment of the beginnings, aims and functions, administrative organizations, and general trends of American junior colleges.

Credit: 2 semester-hours

EDUCATION 553. *Core-Curriculum and Life-Adjustment Programs in High Schools*

This course concerns two leading educational developments of the last decade after a discussion of their philosophy and historical antecedents. The most significant school programs already adopted to put these developments into practice are presented in detail.

Credit: 2 semester-hours

EDUCATION 554A and 554B. *Psychology and Education of Exceptional Children*

This course surveys current practices and problems in the education of children with physical, mental, and emotional handicaps, and of gifted children. It is designed for teachers, counselors, supervisors, and administrators who may work with one or more such children or who may wish to prepare for school and community leadership in developing facilities for exceptional children.

Credit: 2 semester-hours each

EDUCATION 556. *Improvement of Reading in the Secondary School*

This course is planned to present a complete picture of the reading process in its general and specialized aspects as it functions in the various subject-matter fields of the secondary school. Problems in reading are examined, and procedures for the development of growth in personality, interests, understandings, insights, critical thinking, tastes, and appreciations are studied through an examination of the results of recent research.

Credit: 2 semester-hours

EDUCATION 601. *Workshop in Education*

Section A—Organizing and Administering the School

Section B—Supervising Instruction

Section C—Dealing with and Understanding Youth

The workshop course enables the graduate student to devote his time to an educational topic or school problem of current interest to him and to secure the help of the staff, fellow students, and college facilities in pursuing this study. Members of the workshop may meet together to discuss matters of common concern in respect to the current school situation. In addition, the student works independently on his own subject and at times meets with a small group interested in the same area.

In the past, students have worked on topics in such areas as these: problems in administration, guidance programs, extra-curricular activities, school philosophies, problems in supervision, curriculum planning, and community relations. The success of the workshop depends

much upon the student knowing what he wants to accomplish in six weeks, the procedure being flexible enough to support his purposes. He must have his proposed problems for study approved by the Director of the Workshop before he enrolls for the course.

The workshop is offered only in the summer session. It is divided into three sections, as noted above. The student may enroll for four semester hours of credit or for two, the four calling for two periods of scheduled time in the course daily, the two calling for one period of scheduled time in the course. The student taking the course for two credits enrolls for one of the three fields: A—administration, B—supervision, or C—guidance. The student taking it for four credits may do all the work in one of these three fields, or he may enroll for two hours credit in one and two in another.

Credit: 2 or 4 semester-hours

EDUCATION 602. *Seminar in Guidance*

This course is designed to provide a laboratory situation for the exploration and study of the present practices with respect to the three major phases of the guidance program. Usually this seminar is given in conjunction with either Vocational (EDUCATION 535), Educational (EDUCATION 536), or Social-Moral (EDUCATION 537) Guidance. The major portion of the time is spent on field trips, in private investigation, and in research.

Prerequisites: EDUCATION 551, and previously or concurrently the related courses listed above.

Credit: 4 semester-hours

EDUCATION 603. *Principles and Practices of Research*

The purpose of this course is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course the student selects a problem and begins the research which will be completed the second semester.

Prerequisite: MATHEMATICS 400 or equivalent

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

Most of the following courses are set up to serve graduate students as well as College seniors. To carry graduate credit, the course in question must be approved by the candidate's adviser. In all instances, EDUCATION 406, EDUCATION 409, and EDUCATION 410 will be accepted as work for either of the two graduate degrees in this department. For a more complete description of these courses see the undergraduate catalog.

EDUCATION 401. *The Development of Educational Thought*

The purpose of this course is to acquaint the student with the three major philosophical traditions of idealism, realism, pragmatism, and their educational implications, in order that he may begin to formulate his own philosophy of education. These three traditions are studied in their historical and contemporary contexts through text and primary source readings.

Credit: 3 semester-hours

EDUCATION 405. *Teaching the Block-of-Time Program in the Secondary School*

Following a study of the philosophical and psychological bases of the block-of-time program, major emphasis is placed on the methodological problems involved in teaching the program and the development of resource units for use at different levels.

This course is open only to those students who have a major-minor combination of English and social studies.

Credit: 3 semester-hours

EDUCATION 406. *Educational Sociology*

This course deals with the application of sociological principles to educational problems. The school is treated as a part of the community, and the various social forces that affect the school and its administration are considered.

Credit: 2 semester-hours

EDUCATION 407A. *Television in Education Workshop: Programming and Production*

This is a laboratory course designed to develop the techniques, methods, standards, procedures, and criteria pertaining to the special place of television in education. Through the utilization of studio equipment together with the resources of all the academic departments of the college, student potentialities, campus life, and the community,

students receive experience in planning, developing, and producing, television programs of educational value. Actual training is given in the use of standard television equipment on campus, and field trips are made to local television laboratories and studios.

Credit: 2 semester-hours

EDUCATION 407B. *Television in Education Workshop: Classroom Utilization*

This course is designed to give training in the following areas of television education: types of programs best suited for classroom use; practical applications of programs emanating from commercial stations; various subject areas in which television might be used such as language, science, art, social studies, etc.; script writing; co-ordination of program and school schedules; and the possible use of educational television stations and how they best serve surrounding communities. Students are also introduced to the operation of both sending and receiving television equipment so that they may understand program possibilities and limitations.

Credit: 2 semester-hours

EDUCATION 408. *Selection and Utilization of Audio-Visual Materials*

Sources, selection, and evaluation of audio-visual aids are studied in this course. Techniques in developing individual reference catalogs of audio-visual aids are stressed.

Credit: 2 semester-hours

EDUCATION 409. *Radio and Sound Equipment in the Classroom*

This course trains teachers and school executives in the use of radio programs, amplifying systems, recording equipment, and record players. Actual practice is given in the use of these educational aids. Problems of script-writing, microphone and recording techniques, and program directing are considered.

Credit: 2 semester-hours

EDUCATION 410. *Teaching Materials Workshop*

This course is for those persons who wish to study advanced problems in the utilization and administration of audio-visual materials. Individual research is stressed, and there is an opportunity to work out individual projects.

Credit: 2 semester-hours

EDUCATION 411. *Educational Motion-Pictures Workshop*

This course includes various phases of the planning and production of educational motion pictures. Students receive actual experience in scenario writing, costume research, set designing, lighting, photography, editing, and sound recording. During the course an educational film is produced as a class project.

Credit: 2 semester-hours

EDUCATION 420A and 420B. *The Community Centered School*

This course deals with the development and functions of the school as a community resource. Students assemble and interpret data relating to actual school and neighborhood situations. Consideration is given to the social framework in which the school operates; racial and national minorities; intercultural education; truancy and delinquency; and the discovery and utilization of community resources. The use of school personnel and facilities to deal with racial problems is treated in light of the data assembled.

Credit: 4 semester-hours

EDUCATION 421A and 421B. *Leadership of Activities and Services in Community Education*

This course is designed to prepare teachers and others to give leadership to community-education activities. Starting with the assumption that the school should serve as a community center, members of the course proceed to learn about the various activities and programs that can be initiated and carried on by the school. Consideration is given to programming, utilization of space and personnel, and care of equipment. Techniques for organizing and directing special programs such as scouting, folk dancing, crafts, field trips, production of films, forums and debates, etc., are included.

Credit: 4 semester-hours

EDUCATION 422A and 422B. *The Organization, Administration, and Supervision of Programs in Community Education*

This is a workshop type of course which emphasizes the integration of school, social, recreational, and adult education programs. The course presents a survey of current trends in community education as adopted and implemented by boards of education throughout the country. Principles, policies, practices, and problems related to the administration and supervision of community-education programs are surveyed. The following types of programs are considered: summer playgrounds, day camps, after-school centers, evening centers, youth and adult recreation centers.

Credit: 4 semester-hours

EDUCATION 430. *Techniques for Improving Reading Abilities*

This course deals with the diagnosis and remedial treatment of difficulties in reading. A study is made of the basic principles underlying desirable reading experiences and their application in guiding children to success in learning to read adequately.

Credit: 2 semester-hours

EDUCATION 440. *Camping and Outdoor Education*

The purpose of this course is to familiarize the students with camping and outdoor education as educational methods utilized by the schools of America. The aims and methods of camping are studied, and consideration is given to the communities that have active camping and outdoor education programs in operation.

When given through the Part-Time Division of the College, a week-end experience at the New Jersey State School of Conservation in the Stokes State Forest is required for credit in this course.

Credit: 2 semester-hours

EDUCATION 441. *Conservation Education*

This course is designed to give teachers and prospective teachers a background for organizing and teaching conservation on various grade levels. The need for conservation, the various kinds of natural resources, and some of the modern methods for using and renewing these resources are considered. Field trips, laboratory experiences, visual aids, printed materials, and visiting specialists combine to make this a useful introductory course for all teachers.

Credit: 2 semester-hours

EDUCATION 442. *Practicum in Camp Leadership*

In this course the student has an opportunity to learn the techniques of camp leadership through practical experience, guided group study, and discussion. The practical experience comes through serving as a camp counselor in an actual camp situation.

Credit: 2 semester-hours

EDUCATION 444. *Practicum in Conservation Education*

This course is designed to provide teachers and supervisors with a background of experience and knowledge which will enable them to organize and to conduct conservation education programs in their own communities. Using an extensive library of conservation educational material, students formulate teaching units, lists of teaching aids, and projects suitable for use in their own communities. Par-

ticipation in conservation projects with the children in the demonstration camp furnishes a practical background for research and discussion.

Prerequisite: EDUCATION 441, *Conservation Education*, or SCIENCE 412, *Field Studies in Science: Biological*, or SCIENCE 413, *Field Studies in Science: Physical*, or the equivalent

Credit: 2 semester-hours

EDUCATION 450. *Psychological Foundations of Personality*

This course is concerned with the physical, mental, and cultural bases underlying the formation of the personality of the individual. Emphasis is placed upon the implications for the teacher in developing understanding of the formation and measurement of personality.

Credit: 2 semester-hours

EDUCATION 451. *Guidance for the Classroom Teacher*

This course is designed as an introduction to the field of guidance for teachers who are concerned with problems of guidance and human relations in the classroom. This course is also designed to give the new teacher a picture of the place of guidance in the modern school, to indicate what guidance is and what it is not, to indicate the techniques by which guidance is accomplished, and to identify some of the tools of the guidance counselor.

Credit: 3 semester-hours

EDUCATION E460. *Public School Program of Studies*

This title is given to a group of courses designed to meet requests from public school systems desiring help in curriculum reconstruction. Each of the parts of this general course will be given on a cooperative inter-college basis, and taught by specialists in the various fields selected from the faculties of the cooperating State Colleges. Certificates of credit will be issued by the college sponsoring the work.

- Part I. 460A—Principles of Curriculum Revision
- Part II. 460B—Workshop in Curriculum Revision
- Part III. 460C—Organization and Evaluation of Curricula
- Part IV. 460D—The Social Studies Program of Studies
- Part V. 460E—The Language Arts Program of Studies
- Part VI. 460F—The Science Program of Studies
- Part VII. 460G—Workshop in Materials and Methods of
Science Education
- Part VIII. 460H—The Mathematics Program of Studies

These cooperative inter-college courses are provided only when the requests from the public school authorities of the county, municipality,

or community are such as to require their use. No undergraduate may elect this course unless he is actively engaged in teaching. Not more than six semester-hours in these courses may apply on a graduate degree at the Montclair State College.

Credit for each part: 2 semester-hours

EDUCATION E460I. *Public School Program of Studies*

Part IX. Testing and Evaluation in Instructional Program

This course is a part of a group of courses designed to meet requests from public school systems desiring help in curriculum reconstruction and in up-grading of teacher personnel. The course is given as a workshop dealing with testing, test construction, evaluation of students, and evaluation of test results on teacher-prepared tests. Practical classroom tests and actual teaching situations are considered.

Credit: 2 semester-hours

EDUCATION 461. *The Junior High School Curriculum*

Recent trends in the development of the junior high school curriculum and the relation of the curriculum to the aims, function, and organization of the junior high school are the topics covered in this course. Curriculum patterns in representative junior high schools are studied and evaluated. An opportunity is given to each student to develop units of work for junior high school subjects in the major of his choice.

Credit: 2 semester-hours

EDUCATION 480. *Field Science for Elementary Teachers*

Working in a natural setting, rather than an artificial laboratory, this course stresses firsthand experience with natural phenomena and suggests what can be done to convey an understanding of these things to the elementary-school student. In developing an understanding of natural resources consideration is given to such areas as rocks and minerals, plant and animal life, astronomy, weather, and all outdoor phenomena, both physical and biological. If desired, collections are made under supervision, and some latitude is provided for individual specialization in some phase of field science. The student needs no formal scientific background for this course. Methods of teaching on the elementary-school level as well as subject-matter content are included. Simple demonstrations, experiments, collections, acquisition of free and inexpensive materials, reference publications, and the most recent methods and trends in field-trip procedure are considered.

Credit: 2 semester-hours

EDUCATION 491. *Measurement and Evaluation in Teaching and Learning*

This introductory course deals with teacher-made tests, standardized tests, and other devices for measuring and evaluating achievement, intelligence, aptitudes, social relationships, and personal-social adjustment. Instruction and practice are given in diagnosing disabilities in subject-matter areas and in appraising, marking, and reporting pupil progress. The student constructs, uses, and evaluates teacher-made tests, selects and administers standardized tests, handles test scores, and interprets test data.

Credit: 3 semester-hours

ELEMENTARY EDUCATION COURSES

Although Montclair State College is engaged primarily in preparing secondary school teachers, during the present shortage of teachers in the elementary schools it is deemed expedient to offer courses in the field of elementary education for the undergraduates and graduates of this college leading toward certification to teach in the elementary school.

THE DEPARTMENT OF ENGLISH

Graduate study in the Department of English is designed :

1. To broaden the understanding and appreciation of the culture of the Western World through extended study of the literature of Great Britain and the United States, of those European nations which have contributed so much to our American heritage, and of those Oriental nations now exerting an increasing influence upon the modern world.
2. To examine the function of English language communication in the modern world through study of its historical development, its psychological nature, its critical expression, and its practice in the language arts.
3. To enrich the professional background of English teachers through investigation of research and experimentation designed to improve instruction in English in the secondary school.

Requirements for Graduate Study in the English Department

The candidate for the Master's degree must present an undergraduate major of at least thirty semester-hours in English or complete the required number with prerequisite courses prescribed by the Chairman of the Department before matriculation.

Upon matriculation each candidate receives from the Chairman of the Department an approved course outline distributed as follows :

A. *Basic Professional Education*6 semester-hours

These courses include a full year of research as prescribed in EDUCATION 503 and EDUCATION 603 or the equivalent of EDUCATION 603 in a departmental seminar such as ENGLISH 507, 516, 517, 519, or 541.

B. *Departmental Course Requirements*

I. American LiteratureMinimum requirements
4 semester-hours

To be selected from among ENGLISH 407, 525, 533, 537, 538, 540, 543, 545A, 545B, or 546.

II. English LiteratureMinimum requirements
6 semester-hours

To be selected from among ENGLISH 402, 404, 407, 420, 421, 502, 503, 505, 506, 515, 518, 521, 531, 532, 535, 540, 544A, 544B, or 546.

- III. World Literature Minimum requirements
4 semester-hours
To be selected from among ENGLISH 432, 451, 459, 513, 514, 520A, 520B, 524, 528, 530, 534, 536, 539, or 548.
- IV. Language Communication Minimum requirements
4 semester-hours
- a. Language Study
To be selected from among ENGLISH 408, 419, 511, 512, or 516.
- *b. Reading Improvement
To be selected from among ENGLISH 430, 547, EDUCATION 430, EDUCATION 530A, EDUCATION 530B, or EDUCATION 532.
- *c. Speech
To be selected from among SPEECH 410, 417, 435, 448, 449, 454, 456, 457, 461A, 461B, 462, 463, 464, 466, 467, 468, or 522.
- C. *Electives* 8 semester-hours
In meeting this requirement the Department urges candidates for the Master's degree to explore the offerings in other departments and select as widely as possible in those areas not represented in undergraduate study. Such electives help the candidate to achieve the first purpose of graduate study in the Department, "to broaden appreciation of the culture of the Western World."
- TOTAL SEMESTER-HOURS REQUIRED FOR THE A.M. DEGREE
IN ENGLISH 32
- D. *Department Examination or Master's Thesis*
If the candidate chooses to develop a thesis following research in EDUCATION 503 and 603, a departmental sponsor will be appointed as proposed in the "Report of a Sub-Committee of the Graduate Council" on January 5, 1955, and the "Regulations of Research and Thesis Requirements" will be followed in the completion and acceptance of the thesis.
Otherwise, each candidate must pass a written comprehensive examination before the degree is awarded. A part of this examination is a brief oral examination conducted by members of the Graduate Faculty of the Department. The Chairman of the Department announces to the Registrar as well as to members of the Department the dates of the examination which will be given in April and July of each calendar year and will provide candidates with the information desired to prepare for it.

* A course in reading improvement or speech may be offered as two of the semester-hours required in the area of language communication.

GRADUATE COURSES

ENGLISH 502. *Victorian Poetry*

The most important English poets who wrote during the transition from the Victorian to the modern period are read and discussed. An important feature of the course is the analysis and appreciative reading of the lyric poetry of Rossetti, Swinburne, Hardy, Bridges, G. M. Hopkins, Francis Thompson, A. E. Housman, Kipling, and W. B. Yeats.

Credit: 2 semester-hours

ENGLISH 503. *Geoffrey Chaucer and His Times*

Some of the works of Chaucer are read rapidly, others studied intensively, so that the students may acquire a broad general understanding of Chaucer's place in the history of English literature as well as facility in reading and interpreting the medieval text of his stories.

Credit: 2 semester-hours

ENGLISH 505. *Philosophy and British Poetry of the Nineteenth Century*

This course is designed to show the mutual interrelations between currents of philosophic thinking and their influence in selected writings of major poets from Wordsworth to Matthew Arnold.

Credit: 2 semester-hours

ENGLISH 506. *John Milton*

This course has for its primary aim the understanding and evaluation of Milton's poetry. Contributory to this end are the following topics: the Puritan struggle for civil and religious liberty; the growth of science in the Seventeenth Century; the life, personality, and prose writings of Milton; his literary heritage and influence; comparison of Milton with the Cavalier Metaphysical poets.

Credit: 2 semester-hours

ENGLISH 507. *Critical Writing*

This course evolves a body of critical principles for judging art and literature, and provides training in the writing of criticism, ranging from comments upon pupils' themes to a full and comprehensive essay upon the work of some outstanding author. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 511. *The History of Literary Criticism*

The purpose of this course is to familiarize the student with the chief doctrines of the great critics from Aristotle to I. A. Richards and T. S. Eliot and to correlate these critical doctrines with the outstanding writings of each age. By such a study it is possible for the student to evaluate the historical interrelations of expert criticism and literary production. A basic text is used, but much of the information is gleaned from source materials.

Credit: 2 semester-hours

ENGLISH 512. *The Growth and Structure of the English Language*

This course is designed to help the high school teacher understand the structure of modern English, one of the most complicated of contemporary tongues. Through an analysis of the historical evolution of our language, the student discovers the reasons for many of the seemingly illogical and arbitrary characteristics of modern English spelling, grammar, and morphology.

Credit: 2 semester-hours

ENGLISH 513. *The Renaissance*

This course deals with Petrarch and the humanists; Boccaccio and the *Novelle*; the House of the Medici, Savonarola, the Popes; Machiavelli and *The Prince*; Cellini and the *Autobiography*; Castiglione and *The Courtier*; Boiardo, Pulci, Ariosto, and the romantic epic; the drama; the art of Da Vinci, Botticelli, Michelangelo, Raphael, Titian, and others; Rabelais and the *Gargantua and Pantagruel*; Cervantes and *Don Quixote*; Ronsard and the French *Pleiade*.

Credit: 2 semester-hours

ENGLISH 514. *Origin and Development of the Arthurian Legend*

This course deals with the vague and tentative beginnings of the Arthur story in early chronicle and legend; with Geoffrey of Monmouth's pseudo-historical and Chretien de Troyes's romantic treatments; with the great medieval recapitulations of Gottfried von Strassburg, Wolfram von Eschenbach, and Sir Thomas Malory; with the Victorian retellings of Tennyson, Arnold, and Morris; with the musical adaptations of Wagner; and with the modern versions of E. A. Robinson. It includes a detailed history of the development of the legend in its divers forms.

Credit: 2 semester-hours

ENGLISH 515. *Robert Browning*

Browning's characteristic shorter poems are recalled or studied in order to define his fundamental ideas as a writer. This is followed by a study of his longer poems and dramas: the "soul-studies",

Pauline, Paracelsus and Sordello; the dramas, *Strafford, Pippa Passes, A Blot in the 'Scutcheon, Colombe's Birthday, and In a Balcony*; the translations, *The Agamemnon of Aeschylus, and Balaustion's Adventure*; and Browning's masterpiece, *The Ring and the Book*. These works are studied for their literary and philosophical values, as showing the development of Browning as man, poet, and philosopher, and as a reflection of certain phases of Nineteenth-Century life and thought.

Credit: 2 semester-hours

ENGLISH 516. *Language Problems in the English Curriculum*

This course reviews the several theories of language and studies the problem of meaning in order to arrive at a suitable technique for the interpretation of prose and verse. This technique is then applied to the problems of reading, of composition, of speech, and of appreciation of literature. The course has two aims: to increase the student's own skill in dealing with language, and to increase his effectiveness in teaching. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 517. *Recent Research and Experiment in the Teaching of English*

This course analyzes and evaluates current research in the fields of language, literature, and composition relevant to the teaching of English in the high school, and examines critically recent experimentation in methods of teaching English. The aim of the course is to make available to the student any recent knowledge and experience which may throw light on the problems of English teaching in secondary schools and to evaluate tendencies in this field. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 518. *The Major Romantic Poets*

This course studies the work of Coleridge, Wordsworth, Scott, Byron, Shelley, and Keats. It devotes especial attention to the poems which are best adapted for the reading of high school students.

Credit: 2 semester-hours

ENGLISH 519. *English in the Modern High School*

This is a seminar in which the methods and materials requisite to the development of a program in the language arts (listening, speaking, reading, and writing) are considered.

Credit: 2 semester-hours

ENGLISH 520A and 520B. *Great Books on Education*

Students examine the classics dealing with educational theory and practice which they so often read about but rarely consult: Plato's *Republic*, Xenophon's *Cyropaedia*, Cicero's *De Oratore*, Castiglione's *The Courtier*, Machiavelli's *Prince*, Rabelais's *Abbey of Theleme*, Ascham's *Schoolmaster*, Bacon's *Novum Organum*, Defoe's *Projects*, Milton's *To Samuel Hartlit on Education*, Rousseau's *Emile*, Byron's *Don Juan*, Hughes' *Tom Brown's Schooldays*, Newman's *Idea of a University*, the Arnold-Huxley debates, and the works of John Dewey and Jacques Barzun. This course is recommended for graduate students in the Department of Education.

Part A—Plato to Rousseau.

Part B—Rousseau to Dewey.

Credit: 2 semester-hours each

ENGLISH 521. *English Literature of Social Problems*

This course surveys English literature from 1800 to 1914, and the principal authors discussed include Shelley, Dickens, Kingsley, Tennyson, Carlyle, Butler, Meredith, Galsworthy, Bennett, Shaw, and Wells.

Credit: 2 semester-hours

ENGLISH 524. *Five Great Books*

The aim of this course is to broaden and to deepen the student's general cultural perspective by a study of five books which have profoundly influenced present civilization. The actual choice of texts is a cooperative class enterprise. Selections are made from such books as: *The Bible*, Homer's *Odyssey*, Plato's *Republic*, Shakespeare's *Hamlet*, Rousseau's *Confessions*, Goethe's *Faust*, Tolstoy's *War and Peace*, Dewey's *The School and Society*. This course is designed to provide leadership in local "Great Books" meetings.

Credit: 2 semester-hours

ENGLISH 525. *The Development of the American Novel*

The American novel as a contemporary art form is examined in this course. Beginning with the novels of the early Nineteenth Century the course traces the rise and development of the Romantic and the Realistic novel and concludes with an example of American Naturalism. Written criticism of five novels is required.

Credit: 2 semester-hours

ENGLISH 528. *New Perspectives in World Literature*

The point of view of our own democratic culture is surveyed and established in an attempt to see how the literatures of Western Europe, the Middle East, and the Orient have influenced and are influencing modern thinking. Such perspectives are designed to provide adequacy in teaching a world point of view through literature.

Credit: 2 semester-hours

ENGLISH 530. *Dante and His Influence in England and America*

Fully two-thirds of the time of this course is devoted to rereading and reassessment of Dante himself in English translation. When Dante's meaning has been revealed, his continued influence from Chaucer through Sackville, Spenser, and Milton to Rossetti, Longfellow, and T. S. Eliot becomes the subject of investigation.

Credit: 2 semester-hours

ENGLISH 531. *Seventeenth Century Literature*

This course aims to give students an appreciation of the prose style and intellectual content of the best thinkers and writers of the first "modern" century—Bacon, Burton, Walton, Bunyan, Hobbes, Pepys, Dryden; and of the poetic art of Donne and the "Metaphysicals"—Jonson, Herrick, and the "Cavaliers"—Herbert, Cowley, Vaughan, and others.

Credit: 2 semester-hours

ENGLISH 532. *The Victorian Novel*

This is an intensive study of the novel in Victorian England. A review of the development of the English novel before this period is followed by studies in the works of Dickens, Thackeray, Austen, Eliot, Trollope, Meredith, and Hardy. Novels studied in the high school are treated professionally in class.

Credit: 2 semester-hours

ENGLISH 533. *Masters of American Literature*

Significant American writers, including Irving, Hawthorne, Poe, Emerson, Melville, Whitman, and Mark Twain, are studied to discover their contributions to American life and to reveal important forces in our national background.

Credit: 2 semester-hours

ENGLISH 534. *Medieval Epic, Saga, and Romance*

This course deals with the chief medieval epics, sagas, and romances from the literature of England, France, Germany, Ireland, Iceland, Wales, and Italy in modern English translation. Attention is given both to those narratives which reflect the life of a particular country and to those which are international and express more generally the spirit of medieval Europe.

Credit: 2 semester-hours

ENGLISH 535. *Eighteenth Century Literature*

Major essayists, poets, dramatists, novelists, and letter writers are read and evaluated in terms of the thought, life, and literary movements of their own time and of their significance for the present generation. Authors studied include Addison, Steele, Defoe, Swift, Goldsmith, Sheridan, Gray, Johnson, Boswell, Cowper, Richardson, Fielding, Sterne, Smollett, and Burke. High-school classics receive special attention.

Credit: 2 semester-hours

ENGLISH 536. *Philosophy of Great Literature*

By studying one or two masterpieces in a given semester this course aims to help the student develop a plan of study to achieve a systematic understanding of the philosophic world-views and life-views implicit in such works as: Aeschylus's trilogy, *The Oresteia*; Plato's *Timæus*; Boethius's *Consolations of Philosophy*; Dante's *Divine Comedy*; Shakespeare's *Hamlet*; Milton's *Paradise Lost*; Pascal's *Pensées*; Goethe's *Faust*; Blake's *The Marriage of Heaven and Hell*; Dostoievski's *Brothers Karamazov*; Mann's *The Magic Mountain*; Hesse's *Demian*; Henry Adams's *Mont St. Michel and Chartres*; the *Bhagavad-Gita*; Lao-tse's *The Book of Tao*; and Auden's *Collected Poetry*.

Credit: 2 semester-hours

ENGLISH 537. *American Drama in American Democracy*

This course uses plays produced upon the American stage to illustrate the development of democratic concepts from Colonial Days to the contemporary theatre.

Credit: 2 semester-hours

ENGLISH 538. *American Literature of Social Problems*

This course surveys the American literature which presents social problems during the period from 1800 to 1914 in an attempt to discover the attitudes of the various authors toward these problems. The works of such authors as Cooper, Lowell, Thoreau, Whitman,

Howells, Bellamy, Garland, and Glasgow are studied from this point of view. Enough of the social background of the period is discussed to give the necessary perspective for the discussion of the literature, but the emphasis is placed on the reflection of the problems in literature and not merely on the problems themselves.

Credit: 2 semester-hours

ENGLISH 539. *Theatre and Society*

Dramatic expression from the time of the ancient Greeks to the present is studied carefully to analyze social, political, and ethical trends as they are reflected in the drama. The members of the course prepare analyses of social trends in contemporary drama. This research provides the basis for reports given during the latter part of the course.

Prerequisite: ENGLISH 102 or its equivalent

Credit: 2 semester-hours

ENGLISH 540. *The Modern Novel*

Emphasis is given to British and American novels since 1870, and the important tendencies of present-day prose fiction are explored. Students are taught how to read a novel with profit, and how to guide and direct the reading of others.

Credit: 2 semester-hours

ENGLISH 541. *The Teaching and Appreciation of Poetry*

This course is both personal and professional. It develops the student's appreciation of poetry as an expression of life and as a form of art, and it considers in detail the aims and methods of teaching poetry. This course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 543. *Contemporary American Literature*

This course studies the major authors and literary movements in America during the contemporary period. Beginning where the course in *Masters of American Literature* normally ends, it is designed to complete a unit in this subject.

Credit: 2 semester-hours

ENGLISH 544A and 544B. *Shakespeare*

This course, in two parts, presents all of Shakespeare's plays as opposed to those taught only in high school, which is the chief concern of ENGLISH 301B. Here the poet's full development can be seen, providing a complete critical experience. Critical analysis, contentual evaluation, and textual problems are the main areas of concern. Part A deals with the tragedies; Part B, the comedies. The chronicle plays are woven into the discussion.

Credit: 2 semester-hours

ENGLISH 545A and 545B. *American Literature*

This chronological survey reflects the interplay of life and letters in the American scene, examining the political, social, and ethical motivations of the great movements in literature, and reading the separate works in the light of the influences that brought them into being. Part A commences with the Puritan Tradition and ends just as the Civil War is beginning. Part B traces, in life and in literature, the growth of the great democratic tradition in America.

Credit: 2 semester-hours

ENGLISH 546. *Modern Drama*

An historical survey of trends, dramatists, plays, and accomplishments from Ibsen to the latest prize plays on Broadway provides background for this course. An examination of the structure and content of plays to determine what constitutes a good play stimulates appreciation. Students are encouraged to read widely and to see current productions on Broadway.

Credit: 2 semester-hours

ENGLISH 547. *Reading Interests of High School Students*

Through wide reading, study and preparation of bibliographies, and establishing criteria for judging current books, the student is prepared to guide the recreational reading of junior and senior high-school students.

Credit: 2 semester-hours

ENGLISH 548. *Fiction as an Image of World History*

This course presents a sequence of historical and cultural novels which aims to present insight into the eras of man's history from pre-historic to present time. Among novels read are: Jensen, *The Long Journey*; Mann, *Joseph and His Brothers*; Yourcenas, *Hadrian's Memoirs*; Merejowski, *The Romance of Leonardo da Vinci*; Reade, *The Cloister and the Hearth*; and Manzoni, *The Betrothed*.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

ENGLISH 402. *Survey of British Literature to 1798*

This course draws together into a systematic narrative the story of the development of English literature from the beginnings to the romantic triumph of 1798.

Credit: 3 semester-hours

ENGLISH 404. *Survey of British Literature*

This course is a continuation of ENGLISH 402. It takes up the story with the romantic triumph in 1798 and continues it to the present time.

Credit: 2 semester-hours

ENGLISH 407. *British and American Biography*

Both the old and new types of biography are read and studied in this course, with emphasis upon the Nineteenth and Twentieth centuries.

Credit: 2 semester-hours

ENGLISH 408. *Creative Writing*

Students in this course attempt seriously the standard literary forms in prose and verse.

Credit: 2 semester-hours

ENGLISH 413. *Modern Poetry.*

This course deals with the work of contemporary poets, both British and American. Much of the best modern poetry is studied for interpretation and appreciation. The distinctive poetry "movements" that have occurred during the present century are examined as expressions of changing social and artistic ideals. Critical appreciation of poetry is developed through comparison of the diverse styles, themes, and poetic theories present in modern poetry.

Credit: 2 semester-hours

ENGLISH 419. *Grammar for Teachers*

This course is a study of the basic facts of grammatical relationships in English, and of the current problems of "rules" as opposed to "usage." The primary aim of the course is to acquaint students with the true function of grammar in speech and writing.

Credit: 2 semester-hours

ENGLISH 420. *High School Classics*

This course is a seminar for prospective student teachers on the problem of teaching literature in high schools. The student reads numerous articles on the "classics" vs. the "moderns" controversy, becomes thoroughly acquainted with the contents and aims of the best high school anthologies currently in use, and builds up a working philosophy for his own teaching. Through the continued practice of reporting and discussion leading, the student is enabled to integrate his total experience in college.

Credit: 2 semester-hours

ENGLISH 421. *The Short Story*

This course traces the history of the short story as an evolving literary form, emphasizing the productions of the Nineteenth and Twentieth centuries.

Credit: 2 semester-hours

ENGLISH 428. *The Film and Society*

This course considers the impact of the motion picture on our culture. The film is studied and evaluated as a powerful social and educative force, as an art form, and as an entertainment medium. The origin and development of film techniques are treated, and films are shown at each session, accompanied by analysis and discussion. The scenario as a literary type and the adaptation of prose fiction for film purposes are included in the course content. A laboratory fee of \$5.00 to cover the cost of film rentals accompanies this course.

Credit: 2 semester-hours

ENGLISH 430. *Reading in Secondary Schools*

After examination of recent research concerning reading activities at various age levels, the class examines and evaluates methods devised to develop reading skills, to increase vocabularies, and to improve the comprehension of secondary school students.

Credit: 2 semester-hours

ENGLISH 432. *The Development of the Drama*

The development of the drama is studied in all periods from ancient Greece and Rome through the Middle Ages and the Renaissance to the beginning of modern drama with Ibsen. The emphasis of the course is placed on the major characteristics of the drama and its necessary complement, the theatre. Representative plays are read and discussed.

Credit: 2 semester-hours

ENGLISH 446. *The One-Act Play*

This course studies the one-act play as an art form, devoting special attention to plays which are suitable for high school production.

Credit: 2 semester-hours

ENGLISH 451. *Literature and Art in Western Culture*

This course deals with the nature of literature and considers its importance as a factor in the development of international understanding. It deals with the relation between the use of language in literature and with the methods of art, since the re-creation of experience is a function common to both. Through reading the literature which is being read by our neighbors today, both in Europe and in the Western Hemisphere, students are able to participate in a common experience with them.

Credit: 2 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

Some of the contributions which have gone into the making of Chinese literature, such as the *Book of Odes* of Confucius, the poems of Li Po and Tu Fu, the Lute Song, and the Dream of the Red Chamber, are considered in this course. Aside from a general survey of the great literature of China special attention is given to English translations of the masterpieces of Chinese literature. There are twenty-four hours of lectures in the morning; after lunch each day a period of forty-five minutes is devoted to informal talks, story-telling, singing of Chinese songs, and showing of motion pictures. During the workshop period individual students work on specific topics under the guidance of the instructor.

Prerequisite: SOCIAL STUDIES 499—*Introduction to Chinese Culture*

Credit: 3 semester-hours

DEPARTMENT OF FOREIGN LANGUAGES

In answer to the growing demand for graduate work, the Foreign Language Department offers a program based on STUDY ABROAD. Through personal contact and experience, the student, thus, can increase both his knowledge and understanding in respect to the people whose language he is preparing to teach. This means that the student will do part of his graduate work at a selected college in a country where the language of his major is spoken. To assist with this program of STUDY ABROAD, the Foreign Language Department yearly offers scholarships for qualifying applicants. These scholarships are sustained by a Student Exchange Fund. Students who are interested in obtaining a STUDY ABROAD scholarship should consult with the Chairman of the Department for particulars. This program is open only to graduates of Montclair State College. Sixteen semester-hours of graduate credit are granted for this work. The remaining sixteen hours necessary for the Master's degree are to be selected from graduate courses offered at Montclair. There is also required a final comprehensive examination in the student's major field and a thesis developed from the study and residence in the year abroad. The thesis will be credited as part of the sixteen semester-hours total allowed for the work in the foreign country. The following plan outlines the work for a Master's degree in the Department of Foreign Languages:

<i>Required Courses</i>		<i>Credits</i>
French 502	<i>Study Abroad</i>	16 semester-hours
or		
Spanish 502	<i>Study Abroad</i>	16 semester-hours
Education 503	<i>Methods and Instruments of Research</i>	2 semester-hours
<i>Electives</i> (To be selected in consultation with the Chairman of the Foreign Language Department)		
Education courses		4 semester-hours
Graduate courses in other departments of the college		10 semester-hours
Total		32 semester-hours

Final comprehensive examination in major field of foreign language.

FRENCH 502. *Study Abroad*

Credit: 16 semester-hours

SPANISH 502. *Study Abroad*

Credit: 16 semester-hours

DEPARTMENT OF INDUSTRIAL ARTS EDUCATION

Graduate work in the Department of Industrial Arts Education is designed to help teachers of industrial arts (1) to become more proficient in teaching through study of recent trends and new developments in the field, (2) to improve organization of the industrial arts laboratory, and (3) to provide a basis for work in supervision and administration. Advanced work in industrial arts and related areas which will meet needs and broaden professional experiences of industrial arts teachers is emphasized.

An undergraduate major as established by the State Board of Education is a prerequisite for matriculation as a candidate for the degree. Individuals who have an undergraduate major in this area, but who do not wish to work toward a degree, may enroll in graduate courses in the department with the consent of the adviser.

GRADUATE PROGRAM OF STUDIES

MASTER OF ARTS DEGREE IN INDUSTRIAL ARTS
EDUCATION

I. <i>Basic Professional Course Requirements</i>		S. H.
A. Ed. 503. <i>Methods and Instruments of Research</i>		2
(Math. 400, <i>Educational Statistics</i> , is a prerequisite for Ed. 503.)		
B. Each student with the approval of his adviser selects four more semester-hours of education credit.		4
(Two 500-level courses for two semester-hours each—preferably in the areas of administration, curriculum, guidance, or supervision.)		
Total		6
II. <i>Industrial Arts Requirements</i>		
Each student with the approval of his adviser will select eighteen semester-hours of departmental work to be selected from among the following:		
Ind. Arts 501. <i>Curriculum Construction and Course Organization in Industrial Arts Education</i> —3 s. hrs.		
Ind. Arts 502. <i>Shop Planning and Equipment Selection in Industrial Arts Education</i> —3 s. hrs.		
Ind. Arts 503. <i>Problems in Teaching Industrial Arts</i> —3 s. hrs.		
Ind. Arts 504. <i>Research and Experimentation in Industrial Arts Education</i> —3 s. hrs.		
Ind. Arts 505. <i>History of Industrial Arts Education</i> —3 s. hrs.		

Ind. Arts 506. *Vocational Education in New Jersey*—3 s. hrs.

Ind. Arts 511. *Supervision of Industrial Arts*—3 s. hrs.

Ind. Arts 601. *Seminar in Industrial Arts Problem Solving Approach to Teaching*—3 s. hrs.

Total 18

If the candidate chooses to develop a thesis, creative project, or field study following research in EDUCATION 503 and 603B, a departmental sponsor will be appointed. The "Regulations of Research and Thesis Requirements" will be followed in the completion and acceptance of the thesis. Credit for such a project will be in the extent of four semester-hours.

III. *Electives*

The candidate may select, after consultation with the adviser, courses that will round out his background. Candidates are urged to explore the offerings in other departments and select as widely as possible in those areas not represented in undergraduate study.

Total 8

Thesis

Each candidate who does not choose to develop a thesis, creative project, or field study, must pass a written comprehensive examination before the degree is awarded. The examination will be given during the spring semester each year. Students desiring to take the examination should notify the department prior to the beginning of the spring semester. They will then be notified of the date and provided with general information pertaining to the examination.

Grand Total 32

GRADUATE COURSES

INDUSTRIAL ARTS 501. *Curriculum Construction and Course Organization in Industrial Arts Education*

This course presents a study of curriculum construction techniques used in developing a program of industrial arts. How to make a course of study and how to develop instructional materials are given special attention. The evaluation of pupil progress based on tests and other evaluative criteria are studied.

Credit: 3 semester-hours

INDUSTRIAL ARTS 502. *Shop Planning and Equipment Selection in Industrial Arts Education*

This is a lecture and laboratory course organized to give basic understanding of the principles of planning a modern laboratory and equipping it. A study is made of standards, and actual practice is given in laying out floor plans, selecting and placing equipment, and studying architectural aspects of a functional building.

Credit: 3 semester-hours

INDUSTRIAL ARTS 503. *Problems in Teaching Industrial Arts*

Problem solving techniques are studied and used in aiding individuals to solve problems which they have encountered in their teaching of industrial arts. Individual and group reports are discussed and analyzed.

Credit: 3 semester-hours

INDUSTRIAL ARTS 504. *Research and Experimentation in Industrial Arts Education*

Each individual is required to plan an experimental project, select the needed materials, organize the procedure, construct the necessary equipment, conduct the experiment, and record the findings.

It is recommended that a minimum of four semester-hours of credit, selected in consultation with the adviser, be taken as a prerequisite to this course.

Credit: 3 semester-hours

INDUSTRIAL ARTS 505. *History of Industrial Arts Education*

This course presents the history and development of industrial arts education as well as the contributions of leaders and their efforts to develop a program to meet the needs of individuals for their time. Individual and group study methods are used in tracing the development from its inception to the present time.

Credit: 3 semester-hours

INDUSTRIAL ARTS 506. *Vocational Education in New Jersey*

The industrial development of the United States is studied as a background for the development of vocational schools. Emphasis is placed on trade, industrial, and distributive education programs in New Jersey, State and Federal legislation, teacher training, and occupational efficiency resulting from the program.

Credit: 3 semester-hours

INDUSTRIAL ARTS 511. *Supervision of Industrial Arts*

This course presents a study of administrative principles and practices found in the modern laboratory. Special attention is given to the methods used to upgrade in-service teachers, the place of industrial arts in general education, requisitioning supplies, budgeting, distributing supplies, and techniques used in supervising the program.

It is recommended that a minimum of four semester-hours of credit, selected in consultation with the adviser, be taken as a prerequisite to this course.

Credit: 3 semester-hours

INDUSTRIAL ARTS 601. *Seminar in Industrial Arts Problem Solving Approach to Teaching*

Students desiring to evolve the problem-solving approach to teaching, for use in their own industrial-arts laboratories, have the opportunity to structure and develop the necessary techniques and materials. The work is conducted under seminar and individual guidance. The hours for the seminars and conferences are, therefore, arranged between the student and the instructor.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

The following courses are not required for the Master's degree in Industrial Arts Education. With the approval of the Chairman of the Department, they may be used as elective credits.

INDUSTRIAL ARTS 401. *Comprehensive General Shop for Elementary and Junior High Schools*

Laboratory experiences are organized according to the principles and philosophy of a general shop at the kindergarten, elementary, and junior high school levels. Each student has the opportunity to plan a laboratory program entailing as many of the areas as needed to produce the type of program found at these levels in the public schools of New Jersey. All students are encouraged to gain experience at the kindergarten, elementary, and junior high school levels as consultants working with the classroom teachers of these levels. Students are encouraged to develop class units, group projects, and individual projects which are related to the lives of boys and girls in these grade classifications.

Credit: 4 semester-hours

INDUSTRIAL ARTS 402. *Comprehensive General Shop for Senior High School*

In this course laboratory experiences are organized under the principles and philosophy of a general shop at the high-school level. Students are encouraged to develop class units, group projects, and instructional materials, and to perfect or develop new technical skills appropriate for the high-school level.

Credit: 4 semester-hours

INDUSTRIAL ARTS 403. *Metal and Power, III*

The third experience in metal and power gives advanced work in these areas. The metal area includes activities in brazing, foundry, machine shop, low pressure welding, and mass production techniques. The power area involves experiences in auto mechanics, power mowers, outboard motors, diesels and other combustion engines, mechanical power, steam power, and hydraulics.

Credit: 4 semester-hours

INDUSTRIAL ARTS 406. *Industrial Arts Instructional Materials*

Laboratory and seminar experiences are organized to prepare courses of study, to write instructional materials, and to construct tests and other devices for evaluating the progress of pupils. Community resources are utilized to correlate them with the school experiences.

Visual aids are examined and constructed to solve specific teaching problems. Teaching techniques are strengthened through the application of demonstrations using various materials created. Various methods used in the requisition of tools, materials, and equipment are studied through theory and practical applications.

Credit: 4 semester-hours

INDUSTRIAL ARTS 442. *Conservation of Basic Industrial Materials*

In this course the students live for ten days at the New Jersey State School of Conservation, Stokes Forest. Study is devoted to the origin, development, use, and consumption of the basic industrial materials as they exist in their natural state. The materials studied include wood, plastics, leather, ores, petroleum, textiles, and steel. The course material is developed through the use of (1) field trips to the natural sources of supply and basic industries, (2) films concerning the materials and their use in industry, and (3) discussion periods with the specialists of industry and government officials who are responsible for conserving and using these materials.

Note: The fee for this course is \$55.00 which includes tuition, board, lodging, transportation on field trips, and use of recreational facilities.

Credit: 2 semester-hours

INDUSTRIAL ARTS 443. *The Use and Processing of Basic Industrial Materials by Modern Industry*

In this course the students live for ten days at the New Jersey State School of Conservation, Stokes State Forest. Study is devoted to the recognition, use, and processing of the basic industrial materials as done by industrial concerns. The materials studied evolve around the use of ores, wood, fuels, and agricultural products as they are transformed or processed by industry in the making of additional semi-finished raw materials such as plastics, leather, power, textiles, ceramics, steel, and metal products. The course material is developed through the use of (1) field trips to the industries, (2) films and visual aids concerning the transformation of the basic materials by industry, and (3) discussion periods with specialists of the industry, government officials, and educators.

Credit: 2 semester-hours



North Campus View

DEPARTMENT OF MATHEMATICS

The graduate courses in mathematics are designed to meet the needs of teachers in service. There is opportunity for further study in pure mathematics, in the applications of mathematics to related fields, and for the study of current problems in the teaching and supervision of mathematics.

A candidate for the Master of Arts degree in mathematics should consult the Graduate Counselor of the Mathematics Department before matriculation, since the choice of graduate courses should be adjusted to the preparation acquired in undergraduate work. Of the thirty-two graduate credits required for the degree, eighteen or more (the exact number depends upon the candidate's interest and previous preparation) must be taken in the Department of Mathematics. Most college graduates will be able to complete, if necessary, the prerequisite of thirty semester-hours of undergraduate mathematics in the Part-Time Division of the College.

REQUIREMENTS IN MATHEMATICS DEPARTMENT

- I. At least 18 semester-hours of graduate courses in mathematics are required. These courses must bear catalog numbers equal to or greater than 500, unless permission is granted the candidate by the Graduate Counselor of the Mathematics Department to take courses with numbers less than 500 for graduate credit.

The graduate courses in mathematics are grouped into the following three divisions:

- A. Pure Mathematics

The basic subject-matter courses are MATHEMATICS 503, 504, 508, 517, 518, 519, 523, 524, 531, 532, 533.

- B. Applied Mathematics

These courses emphasize the applications of mathematics to related fields of work. They give an extension and generalization of secondary-school mathematics together with certain phases of college mathematics which are employed in solving problems arising in the physical, biological, and social sciences. The principal aim is to supply background information that may be used to enrich the teaching of mathematics. These courses are: MATHEMATICS 512, 513, 522, 525, 535, 536, 551, 552, 553, 554, 602A, 602B, 602C.

C. Teaching and Supervision of Mathematics

The principal items considered are the current problems arising in the teaching and supervision of mathematics, the organization and construction of course syllabi, administrative problems, and the use of current mathematical literature. The chief purpose is to enable the teacher to select more suitable teaching material, to improve teaching techniques, and to use effectively various types of teaching aids. These courses are: MATHEMATICS 501, 506, 507, 528, 529, 530, 540, 601.

II. *Requirements in the Education Department*

A. EDUCATION 503, *Methods and Instruments of Research*, for two semester-hours, is required of all students.

B. In addition, four semester-hours must be selected from these courses: EDUCATION 408, 409, 500A, 500B, 500C, 504A, 505, 521A, 521B, 535, 536, 537, 538, 551, 553.

III. *Elective Courses*

The candidate may select, after consultation with the adviser, from six to eight credits of elective courses that will round out his total program of thirty-two semester-hours.

Thesis

In lieu of four of the required thirty-two credits, the candidate may write a thesis giving the results of some study in the field of mathematics or its teaching. This study must be made after consultation with the Graduate Counselor of the Mathematics Department and under the sponsorship of a member of the mathematics faculty. Plans should be made to have such a study in its final form and approved by the Mathematics Department by April 1st of the year in which the degree is anticipated. The preparation of such a dissertation does not relieve the candidate of any of the required credits in mathematics.

IV. *Final Examination*

A final examination in mathematics is given all candidates prior to the conferment of the degree. This examination is general in nature and is designed to test the candidate's maturity of thought in mathematics and in the teaching of mathematics.

GRADUATE COURSES

MATHEMATICS 501. *Administration and Supervision of Mathematics*

This course is concerned with the problems met in organizing and supervising the teaching of mathematics. The topics considered are the functions and qualifications of the supervisor of mathematics, in-service training of teachers, demonstration lessons, professional attitude and preparation of teachers, department meetings, selection of texts, current problems, research, and the basis for determining objectives. Some attention is paid to efficient methods of securing mastery of skills, the development of power in problem solving, and the organization of testing programs.

Credit: 2 semester-hours

MATHEMATICS 503. *Foundations of Algebra*

Careful consideration is given to the fundamental concepts and postulates which form the foundation of algebra. The modern algebraic theories of groups, rings, and number fields are introduced. The development of our number system, algebraic criteria for the possibility of geometric constructions, and the general theory and use of polynomial functions are considered.

Credit: 2 semester-hours

MATHEMATICS 504. *Modern Algebra*

Vectors and vector spaces are introduced as generalizations of numbers and number systems. Particular attention is also given to matrices, determinants, and linear dependence. Applications are considered.

Prerequisite: MATHEMATICS 503 or permission of the instructor

Credit: 2 semester-hours

MATHEMATICS 506. *Principles of Teaching Secondary School Mathematics*

The primary purpose of this course is to relate recent psychological research into the learning process to the presentation of specific areas of secondary-school mathematics. Among the topics considered are: motivation, concept formation, drill, transfer of training, problem solving, and provisions for individual differences.

Credit: 2 semester-hours

MATHEMATICS 507. *The Teaching of General Mathematics*

This course is concerned with mathematics programs for the non-college-bound high-school student. Reports and recommendations from curriculum studies are examined. Among the topics considered are: characteristics of non-academic students, consumer mathematics, remedial arithmetic, preparation and use of resource materials, and classroom teaching techniques.

Credit: 2 semester-hours

MATHEMATICS 508. *Foundations of Geometry*

The elements of geometry include the logical foundations of geometry, finite projective geometries, construction of rational points on a line and on a plane, and topology. The emphasis is on the mathematical prerequisites for understanding contemporary proposals for secondary-school geometry.

Credit: 2 semester-hours

MATHEMATICS 512. *Numerical Analysis*

This course deals with the determination of functions from observed experimental data. Among the topics considered are: finite differences, symbolic operators, differencing, interpolation formulae, the Gamma function, and the Euler-MacLaurin formula. The course is designed to show the nature of mathematics as an applied science.

Credit: 2 semester-hours

MATHEMATICS 513. *Computer Programming*

This course is concerned with the elementary mathematics of computer programming. The use of machines by high-school students and the development of simple codes are considered.

Credit: 2 semester-hours

MATHEMATICS 517. *The Theory of Numbers*

This course offers a systematic treatment of certain fundamental properties of numbers along with a discussion of their historical background. It includes such topics as: properties of integers; Euclid's algorithm; prime numbers; factorization; perfect numbers; linear indeterminate and Diophantine problems; properties of congruences and their solutions; fundamental theorems of Euler, Fermat, Wilson, and others; and quadratic residues.

Credit: 2 semester-hours

MATHEMATICS 518. *The Theory of Functions of Real Variables*

The fundamental properties of real numbers and the elementary properties of functions of real variables are systematically developed. Among the topics considered are: continuity, differentiability, integrability, algebraic and transcendental functions, hyperbolic functions, and infinite series.

Prerequisite: MATHEMATICS 407 or permission of the instructor

Credit: 2 semester-hours

MATHEMATICS 519. *The Theory of Functions of Complex Variables*

The fundamental properties of complex numbers and the elementary properties of functions of complex variables are developed. These include the properties of mappings, line integrals, Cauchy-Goursat Theorem, and conformal mapping. The practical applications of the theory are stressed by the use of illustrative examples.

Prerequisite: MATHEMATICS 407 or permission of the instructor

Credit: 2 semester-hours

MATHEMATICS 522. *Introduction to Probability and Statistics*

The primary objective of the course is to give at least a minimum preparation in probability and statistics for the topics that are included in the newer high-school program. Topics include: the summarization of data, intuitive probability, axiomatic development of probability, the Binomial and Poisson distributions, the normal curve distribution, elements of sampling and elements of testing hypotheses. Both the experimental and the axiomatic approach to this material are studied. An examination of currently available material is included. This course is not open to students who have received credit for MATHEMATICS 408.

Credit: 2 semester-hours

MATHEMATICS 523. *The Theory of Probability*

This course develops the formal mathematical theory of probability and also describes the empirical background. In addition a variety of applications in both physical and social sciences are developed. Topics include: historical background; sample space; elements of combinatorial analysis; Binomial, Poisson, and Hypergeometric distributions; normal distribution; mathematical expectation; random walk; and ruin problems.

Credit: 2 semester-hours

MATHEMATICS 524. *Statistical Inference and Sampling Theory*

In this course the student considers the planning and execution of a statistical study. Among the topics considered are: problems in descriptive statistics, discrete and continuous distributions, elements of sampling theory, tests of hypotheses, power functions of statistical tests, analysis of variance and covariance, statistical control, statistical efficiency, and nonparametric statistics. Applications are given to industrial, scientific, and social problems.

Prerequisite: MATHEMATICS 408 or 522

Credit: 2 semester-hours

MATHEMATICS 525. *Curriculum and Teaching of Junior High School Mathematics*

This course is intended to give teachers a deeper insight into the mathematical subject matter and the methods of teaching in grades seven and eight. The structure of the curriculum is studied with an emphasis upon the usual subject matter with provisions for individual differences. Patterns in arithmetic are stressed as an introduction for algebra. Experimental approaches to the study of statistics and geometry are also included.

Credit: 2 semester-hours

MATHEMATICS 528. *Mathematics Materials for Student Activities*

Some of the large amount of material available for individual and club activities in mathematics is considered in this course. Mathematical recreations, plays, topics for essays or club programs, contemporary articles and popular books on mathematics are studied. The materials vary from elementary arithmetical recreations to topics involving advanced mathematical ideas. Topics considered include: recreations; arithmetical, geometrical, and logical problems in arrangement; polyhedrons and crystallography; classical problems of antiquity; cryptography; magic squares; topological and unicursal problems.

Credit: 2 semester-hours

MATHEMATICS 529. *Curriculum Construction in Mathematics*

This course is concerned with the implications and classroom implementation of contemporary recommendations for college preparatory curriculums in secondary-school mathematics.

Credit: 2 semester-hours

MATHEMATICS 530. *Mathematics Materials for the Teacher of Mathematics*

This course is concerned with the adaptation and use of multisensory materials to motivate and improve the teaching of high-school mathematics. Particular attention is given to the equipment needed for a modern mathematics laboratory; to the effective use of such equipment; to such visual aids as pictures, drawings, slides, motion pictures, and bulletin-board exhibits; and to books, periodicals, and pamphlets needed for the school and for the teacher's library.

Credit: 2 semester-hours

MATHEMATICS 531. *Survey of Higher Mathematics*

This course is intended for students who have already taken several graduate courses in mathematics. The principal aim of the course is to provide these students with additional insight into the nature and content of the various fields of mathematics.

Credit: 2 semester-hours

MATHEMATICS 532. *Projective Geometry*

The methods of synthetic and analytic projective geometry are compared and used to emphasize the fundamental concepts of Euclidean geometry. Emphasis is placed upon the dependence of many common properties and theorems of Euclidean geometry and upon the properties of lines, parallelism, perpendicularity, similarity of figures, and the definition of distance.

Prerequisite: MATHEMATICS 508 or permission of the instructor

Credit: 2 semester-hours

MATHEMATICS 533. *Non-Euclidean Geometry*

The development of Hyperbolic-Non-Euclidean and of Elliptic-Non-Euclidean geometry is carefully traced. A brief survey of the historical development of each is given. This course is designed for teachers and students of mathematics who desire a better perspective of the field of geometry.

Credit: 2 semester-hours

MATHEMATICS 535. *Professionalized Subject Matter: Algebra*

This course is devoted to a critical examination of secondary-school mathematics with special emphasis upon algebra. Stress is placed upon the integration of traditional and modern approaches to these topics: logic and proof, the number system, fundamental laws of algebra, algebra of sets, variables and functions, algebraic functions.

Credit: 2 semester-hours

MATHEMATICS 536. *Professionalized Subject Matter: Analysis*

This course is devoted to a critical examination of secondary-school mathematics with special emphasis upon analysis. The emphasis is on content and organization rather than on methods. Topics include: trigonometric, logarithmic, and exponential functions; analytic geometry of two and three dimensions; the theory of limits; the fundamental theorems of calculus; and the Advanced Placement program in senior high school.

Credit: 2 semester-hours

MATHEMATICS 540. *Research Seminar in Mathematics*

This seminar is designed primarily for those students who select some problem of interest in either the subject matter or the teaching of mathematics for intensive study and research. A written report is required of each student.

The course is open to all students who have had at least eight semester-hours of graduate work in mathematics. It is required of all students who wish to write a master's dissertation in this field.

Credit: 2 semester-hours

MATHEMATICS 551. *Mathematics of Social Sciences*

This course surveys the mathematics of economics, business, sociology, and psychology. The discussion includes such topics as: theory of investments, distribution of wealth and income, use of charts and graphs, business trends, and measurement and presentation of data in social sciences.

Credit: 2 semester-hours

MATHEMATICS 552. *Mathematics of Physical Sciences*

This course includes topics from physics; chemistry; and civil, mechanical, and electrical engineering. The chief purpose is to supply the teacher with background material that may be used to enrich the teaching of secondary-school mathematics.

Credit: 2 semester-hours

MATHEMATICS 553. *Mathematics of Statics and Dynamics*

The fundamental basic principles of this course are Newton's laws of motion, whose applications and consequences are carefully considered in the study of such topics as: the composition and resolution of forces, the statics of a particle and of a rigid body, forces acting upon a body, friction, straight-line motion, curvilinear motion, work and energy, and moments of inertia.

Credit: 2 semester-hours

MATHEMATICS 554. *Mathematics of Cartography, Astronomy, and Navigation*

An opportunity is here offered for mathematics teachers to become acquainted with the mathematics of mapping, astronomy, and navigation closely related to the algebra, solid geometry, and trigonometry taught in high school. A study of spherical geometry and trigonometry leads to topics in mathematical astronomy and geography and to navigation. The discussion includes such topics as: map projections, orbits of planets and satellites, escape velocities, dead reckoning, and celestial navigation.

Credit: 2 semester-hours

MATHEMATICS 601. *Workshop: Current Problems in the Mathematics Field*

This course is conducted as a workshop for the solution of such actual problems in the teaching of mathematics as: courses in mathematics for the general and for the specializing student; integration of mathematics with other courses; revision of subject-matter in particular fields, such as in plane geometry; and research problems in specific units of work. The class meets for conferences, reports, and lectures. Individual conferences between the instructor or consultant and each individual member of the class are held by appointment.

Credit: 3 semester-hours

MATHEMATICS 602A, B, and C. *Workshop on Contemporary Mathematics*

These courses are conducted as workshops to provide teachers with increased insight into contemporary mathematics. The emphasis is upon mathematical principles and concepts. Topics are selected for their significance in revisions of secondary-school mathematics programs. The topics include: analysis of statements, sets, algebra of sets, foundations of algebra, probability, statistics, statistical inference, foundations of geometry, topology, and mathematics of the infinite.

Total Credit: 6 semester-hours

SENIOR-GRADUATE COURSES

MATHEMATICS 402. *Applications of Mathematics*

This course deals with the use of instruments in precision measurements to supply adequate information and teaching techniques for various phases of junior and senior high-school mathematics. It includes the use of the abacus, hypsometer, transit, sextant, planimeter, plane table and scale drawing, etc. The student is required to make some of the simpler instruments and demonstrate their use for classroom instruction.

Credit: 3 semester-hours

MATHEMATICS 404. *Readings and Lectures in Mathematics*

Lectures are given upon advanced topics in mathematics and on those phases of mathematics which are finding new applications, especially as they are related to the secondary field. Besides a mastery of this lecture material, the student is held responsible for a written report on an approved topic or on specific readings in recent mathematical literature.

Credit: 2 semester-hours

MATHEMATICS 405. *History of Mathematics*

As a study of elementary mathematics emphasis is placed on the historical growth of arithmetic, algebra, and geometry. The development of fundamental concepts and operations involving the use of symbols is studied with emphasis placed upon noteworthy contributions and the influence of leading mathematicians. A by-product is the motivating effect of historical information on the teaching and learning of mathematics.

Credit: 2 semester-hours

MATHEMATICS 406. *Solid Analytic Geometry*

A review and extension of the theory of determinants, a study of lines and planes in space, of space coordinates, transformation of coordinates, loci in space, the sphere, and of quadric surfaces are considered in this course. The study of the general quadric equation in three variables, invariance under motion, and the classification of numerical equations completes the course.

Credit: 2 semester-hours

MATHEMATICS 407. *Advanced Calculus*

After a brief review of the fundamental concepts of elementary calculus, more advanced topics are considered which include the theory of limits, continuity, the general theorem of mean value, infinite series, partial differentiation, and multiple integrals.

Credit: 2 semester-hours

MATHEMATICS 408. *An Introduction to Mathematical Statistics*

This first course covers the usual topics in statistics, using calculus as a major tool in the derivation of formulas. Topics included are: types of data and types of measurement; attributes and variables; graphical representation; measures of central tendency and dispersion; moments; binomial, Poisson, and normal distributions; linear regression and correlation; elements of sampling theory and statistical inference.

Credit: 3 semester-hours

MATHEMATICS 409. *Introduction to Contemporary Mathematics*

The aim of this course is to develop the point of view of contemporary mathematics and to consider its potential influence upon secondary school mathematics. Special consideration is given to topics in professional literature for possible inclusion in secondary school mathematics. Such topics include sets, Boolean algebra, a modern concept of variable and function, a detailed study of sentences and statements, the use of symbolism and patterns in mathematics, linear programming, and the application of new mathematical techniques in the social sciences.

Credit: 2 semester-hours

MATHEMATICS 410. *Mathematics of Finance*

This course introduces the student to the elementary theory of simple and compound interest and leads to the solution of practical problems in annuities, sinking funds, amortization, depreciation, stocks and bonds, installment buying, and savings and loan associations. It also discusses the mathematics of life insurance covering the following subjects: the theory of probability as related to life insurance; the theory and calculation of mortality tables; various types of life annuities and insurance policies and reserves. This course is designed to give a helpful background to the mathematics teacher as well as to be an aid to the student of economics and insurance.

Credit: 2 semester-hours

MATHEMATICS 412. *Modern Geometry*

This course presents a treatment of modern synthetic geometry on an advanced level. It is based on a fundamental framework of plane geometry and maturity of teaching in the field of mathematics. This course is not open for credit to students who have received credit for MATHEMATICS 301.

Credit: 4 semester-hours

MATHEMATICS 415. *Differential Equations*

Various applications of differential equations and their standard methods of solution are treated in this course. Among the topics included are: linear differential equations of the first degree and of the first and higher orders, linear equations of the n th order with constant coefficients, linear equations of the second order, exact and total differential equations, simultaneous equations, numerical approximation, and series solutions.

Credit: 2 semester-hours

MATHEMATICS 453. *Differential Calculus*

The basic concepts of differential calculus are developed including: functional relationships, slope, limits, continuity, graphical representations of science problems, differentiation of algebraic and transcendental functions, geometric and physical applications of derivatives, velocity, and acceleration in curvilinear motion. The applications are developed utilizing the scientific background of the students. Students who have taken MATHEMATICS 201 may not take this course for credit.

Prerequisites: At least one year each of college mathematics, college physics, and college chemistry, or permission of the instructor

Credit: 3 semester-hours

MATHEMATICS 454. *Integral Calculus*

The basic concepts of integral calculus are developed including: integration procedures, solid analytic geometry, geometrical and physical applications of the definite integral in two and three dimensional problems, infinite series, and Fourier series with applications. The applications are developed utilizing the scientific background of the students. Students who have taken MATHEMATICS 202 may not take this course for credit.

Prerequisite: MATHEMATICS 453 or permission of the instructor

Credit: 3 semester-hours

MATHEMATICS 480. *Elements of Logic*

This course is intended to help the students develop an understanding of the methods of reasoning used in the mathematical sciences. The point of view and elementary processes of symbolic logic are studied. Background materials are included for the teaching of logical concepts in secondary schools.

Credit: 2 semester-hours

DEPARTMENT OF SCIENCE

The teacher of secondary school science is faced constantly with the problem of maintaining his professional competence with respect to recent advances in the fields of science and science education.

The past two decades have brought forth an astonishing array of new discoveries in biology, chemistry, physics, and other branches of science. Entirely new scientific points of view have to be considered by a teacher who wishes to keep his classroom practices up to date with the most recent findings as reported in current newspapers, magazines, and books.

The unusual growth of enrollment in secondary schools has brought the science teacher numerous difficult problems of science education which require a more scholarly background than has been necessary in previous decades. It is clear that the demands to be made upon the science teacher in the near future will greatly exceed those of any previous decade. A thorough knowledge of science and secondary education is necessary to professional success and promotion.

Other factors operate to multiply the problems of high school science teachers. The rapid growth of work in science in elementary schools and the extraordinary growth of junior high school science preparation foreshadow a fundamental reorganization of the senior high school science program. This work is now well under way in many sections of the country. The courses offered here are designed to help the science teacher meet these changing needs.

Prior to matriculation in the Science Department for the Master of Arts degree the student should complete a subject matter background of thirty semester-hours of college science distributed in the areas of biology, chemistry, and physics. Deficiencies must be made up prior to the conferment of the A. M. degree. A minimum of eighteen semester-hours of graduate credit work in science is required. SCIENCE 401 will not be accepted toward meeting this eighteen semester-hour departmental requirement. The student's work program is prepared in cooperation with the science adviser. Any changes in the student's work program are made only with the written approval of the science adviser.

COURSE REQUIREMENTS FOR THE A. M. DEGREE IN SCIENCE

I. *Education Requirements*

Each student must take EDUCATION 503, *Methods and Instruments of Research*, and four additional semester-hours in Education courses.

II. *Science Requirements*

- A. The candidate must complete three four semester-hour courses from among the following:

Biology	402, 407, 408, 409, 509
Chemistry	405, 406, 407, 408, 411, 412, 508, 509, 510
Physics	402, 405, 406, 407, 408, 409, 411, 510, 512
Science	405, 410, 421

12 semester-hours

- B. The candidate may elect two to three semester-hours from among the following:

Biology 501, Chemistry 501, Science 401D, Physics 501

- C. The candidate may elect up to six semester-hours from among the following:

Biology	412, 413, 414, 508
Chemistry	413
Physics	513
Science	411, 412, 413, 414, 415, 418

- D. The candidate must take SCIENCE 505, *Science Seminar for Junior and Senior High Schools*.

2 semester-hours

- E. With the consent of his adviser, the candidate may elect from among Science courses, Education courses, or other courses on the 400-500 level.

Maximum possible for E—6 semester-hours

BIOLOGY

GRADUATE COURSES

BIOLOGY 501. *The Teaching of Biology in Secondary Schools*

This is a seminar and research course designed to give opportunity for study of the best methods and practices being used in the teaching of secondary school biology. Major topics of discussion are: aims of secondary school biology, course content, functions of textbooks, testing, laboratory exercises and demonstrations, and the collection and use of suitable and available laboratory materials. A study is made of recent research studies in the field of biology teaching.

Prerequisite: 16 semester-hours of work in biology

Credit: 3 semester-hours

BIOLOGY 508. *Social Applications of Biology*

This field-study course offers to teachers of science an opportunity to gain first-hand knowledge of the uses made of biological principles in industry and in modern laboratories. Field trips are designed to cover such varied interests as public health and hospital routine laboratories, medical botanical research laboratories, and the inspection of model industries developing biological products.

Prerequisite: 12 semester-hours of work in biology

Credit: 4 semester-hours

BIOLOGY 509. *Field Studies of Flowering Plants*

The emphasis of this course is placed upon the methods of identification of higher plants and the ecological factors affecting the growth and development of these plants. Plants in their winter conditions are considered first. As the season progresses, the emphasis changes from the identification of woody to herbaceous forms. Plant communities of various types are observed, and the factors influencing their development are discussed. Field trips are taken to such typical habitats as the Pine Barrens, Troy Meadows, and others.

Prerequisite: General botany

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

BIOLOGY 402. *Mammalian Anatomy and Histology*

A study is made of the gross structure of a typical mammal and of the structural peculiarities of its various tissues. Both the anatomical studies and histological studies included in this course are pursued with functional significance strongly emphasized. This course prepares the student for the study of human physiology.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 407. *Comparative Embryology*

A study is made of the stages in development and factors influencing the development of different animal types, particularly the vertebrates. Students in this course follow carefully the development of the chick through the earlier stages. Serial sections of entire chick embryos in different stages of development are prepared by individual students and used as a basis for the study of the development of tissues and organs of the animal. Applications of these details of vertebrate development to the development of the mammal are based on observations made through the dissection of pig embryos.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 408. *Biological Technique*

This course is designed to furnish the prospective teacher of biology with the technical details necessary to enable him as a secondary school teacher to handle successfully biological materials and experiments and demonstrations in which these materials are employed. Students are trained in methods of collecting and preserving plants and animals for use in the laboratory and classroom. Study is made of the proper methods of preparing illustrative materials with special emphasis laid upon the purpose of these materials.

Prerequisites: 8 semester-hours of work in zoology and 4 semester-hours of work in botany

Credit: 4 semester-hours

BIOLOGY 409. *Human Physiology*

A study is made of normal and abnormal physiology based on previous study of mammalian anatomy and histology. In addition to an analysis of the part played by organs and tissues in carrying out the essential functions of the body, special attention is given to

problems of hygiene and sanitation. Applications of the above problems are made in reference to children of school age, and the physical condition of individual pupils is correlated with their behavior in the classroom.

Prerequisite: A course in vertebrate anatomy or BIOLOGY 402

Credit: 4 semester-hours

BIOLOGY 410. *Comparative Anatomy of the Vertebrata*

This course deals with representative members of the phylum chordata. The prochordata are considered briefly. Representative species of the cyclostomata, cartilagenous fish, bony fish, amphibia, reptiles, birds, and mammals are studied by means of dissections and demonstrations. Fundamental principles of the taxonomy, anatomy, physiology, and ecology are reviewed and amplified. This course should enrich the background of those interested in vertebrate forms and should be of value for those interested in man and his place in the world.

Credit: 4 semester-hours

BIOLOGY 411. *Elementary Bacteriology*

This course covers the morphological and biochemical characteristics of bacteria, yeasts, fungi, and protozoa. The relationship of microorganisms to human welfare is stressed. Major topics include: history of microbiology, classification and naming, the physiology of microorganisms, microbiologic techniques and methods, useful activities of microorganisms, microbiology of sewage and water, microbiology of foods, infection and body defenses and infectious diseases. Laboratory sessions emphasize morphological characteristics and biochemical activities of microorganisms.

Prerequisites: BIOLOGY 101, 102, 201, and 202

Credit: 4 semester-hours

BIOLOGY 412. *Genetics*

This course considers the scientific basis of the gene concept and its support in experiments from Mendel's work to the present allegations of the Lysenko school. Documents of some of the milestones in the history of the science are studied, and the adherence to scientific method carefully noted. The wide uses of the science in plant and animal improvement and the discoveries related to man's heredity make an integral part of the study. The course helps the teacher of biology or social studies to discriminate between what is scientifically known and what is political philosophy in genetics. Laboratory exercises supplement lectures and discussion.

An elementary college course in biology is the only prerequisite, and this may be waived in approved cases.

Credit: 2 semester-hours

BIOLOGY 413. *Economic Botany*

The consideration of the importance of plants and plant life to the world in general and to man in particular is the principal aim of this course. The economic importance of bacteria, fungi, and other lower plants is considered as well as that of the seed plants.

Credit: 2 semester-hours

BIOLOGY 414. *Field Ornithology*

New Jersey is one of the best areas in the East for the study of birds. On the Montclair campus alone, over 130 species have been observed. This course deals primarily with the identification and natural history of birds. A variety of habitats is visited so that one can become acquainted with the habits and requirements of this unusually well-adapted vertebrate type. Migration, methods of attracting and protecting birds, the value of birds, and other problems are also considered.

Prerequisite: A year of biology or the equivalent

Credit: 2 semester-hours

BIOLOGY 415. *Entomology*

This course is designed to cover the fundamental aspects of entomology, organized so as to give students a general idea of the entire field. The major emphasis is on understanding basic principles which are of physiological and ecological significance. A survey is made of the common insect families together with experience in identifying major orders and families. Attention is given to insects as economic pests and as vectors of disease. Laboratory work includes a study of gross and microscopic morphology and identification of major group of insects by the manipulation of keys.

Prerequisites: BIOLOGY 201 and 202

Credit: 4 semester-hours

CHEMISTRY

GRADUATE COURSES

CHEMISTRY 501. *The Teaching of Chemistry in Secondary Schools*

This course satisfies the requirements in the teaching of chemistry for the limited secondary certificate. A study is made of the objectives, recent trends, methods of presentation, courses of study, lesson planning, instructional aids, and subject matter of high school chemistry.

Prerequisite: 16 semester-hours in chemistry

Credit: 3 semester-hours

CHEMISTRY 508. *Advanced Organic Chemistry—Biochemistry*

In this course a study is made of the composition of living organisms, their nutritional requirements, their mechanism for promoting and regulating chemical action, and their metabolism of foods. A laboratory study is made of the components of foods, enzyme action, isolation of proteins, etc., blood and urine analysis.

Prerequisites: CHEMISTRY 405 and 406, organic chemistry

Credit: 4 semester-hours

CHEMISTRY 509. *Advanced Inorganic Chemistry*

This course offers opportunity for intensive and systematic study of the elements in the light of the periodic classification. Selected theories and principles of inorganic chemistry and some of their applications are studied in detail. A study is made of types of compounds. Directed use of chemical literature is an important part of this course. Individual experimental work in the laboratory consists chiefly of preparation and purification of inorganic compounds and testing for impurities in the products.

Prerequisite: A course in quantitative analysis

Credit: 4 semester-hours

CHEMISTRY 510. *Food Inspection and Analysis*

A study is made of the composition of commercial food products, the laws governing purity and marketing of foods, methods of analysis of foods and cosmetics, and the judging of foods for quality. Trips are made to food laboratories and food processing plants. Laboratory work is an extension of chemical and microscopic analysis to provide application of various analytical methods. Methods of extraction; detection of adulterants, preservatives, coloring; estimation of carbohydrates, fats, proteins, minerals, and vitamins are included in the laboratory work of the course.

Prerequisites: Organic chemistry and quantitative analysis

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

CHEMISTRY 405. *Organic Chemistry*

The course covers the chemistry of carbon compounds and gives increased facility and experience in manipulating complicated chemical apparatus. It treats of the role of chemistry in life processes, including the synthesis and adaptation of carbon compounds in industry, in medicine, and in daily living. The first semester's work covers the chemistry of simple chain compounds and includes fats and carbohydrates.

Credit: 4 semester-hours

CHEMISTRY 406. *Organic Chemistry*

The work of this semester covers the chemistry of multiple functional chain compounds, the ring compounds, proteins, vitamins, hormones, and the application of these compounds in industry, in foods, and in medicine.

Credit: 4 semester-hours

CHEMISTRY 407. *Advanced Quantitative Analysis*

This course is adapted to the needs and preparation of students. The student, after consultation with the instructor, may select analyses from the following: general or special types of oxidation-reduction; gravimetric methods; colorimetric methods; use of organic reagents in analyses; electrometric titrations; conductimetric titrations; spectrographic methods of analysis; electrodeposition of metals; and special methods of analysis.

Prerequisites: General college physics and one semester of quantitative analysis, or special permission of the instructor

Credit: 4 semester-hours

CHEMISTRY 408A. *Industrial Chemistry, Part I*

The purpose of this course is to enable science teachers to understand the type of chemical industries in the State of New Jersey and the nature of their problems. A survey is made by lectures, reports, and trips to plants of the chemical industries in the State. This section of the course stresses the importance and the characteristics of chemical industry, the various unit operations used by the industry to carry out chemical reactions, the controls used to insure quality, the organization for research, and the type of workers employed.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 408B. *Industrial Chemistry, Part II*

This course is a study of the chemical industries of the metropolitan area utilizing the methods outlined in CHEMISTRY 408A. Also, a study is made of the economics of chemical industry, chemistry and industry in general, and the effects of chemical discoveries upon living conditions.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 411. *Physical Chemistry, Part I*

This course, the first half of a year's work in physical chemistry, deals with gases, liquids, crystals, physical properties and electrolytes, colloids, thermochemistry, and homogeneous and heterogeneous equilibria.

Prerequisites: General college chemistry, analytical chemistry, and general college physics

Credit: 4 semester-hours

CHEMISTRY 412. *Physical Chemistry, Part II*

This course deals with electrical conductance, electrolytic equilibrium, electromotive force, electrolysis, polarization, chemical kinetics, photochemical reactions, atomic structure, molecular structure, and radio-activity.

Prerequisites: General college chemistry, analytical chemistry, and general college physics

Credit: 4 semester-hours

CHEMISTRY 413. *Atomic Structure and Atomic Energy*

This is a lecture course designed to familiarize the student with a modern conception of the structure of matter and to acquaint him with some significant aspects of atomic energy. Some of the topics studied include the following: discoveries leading to knowledge of the structure of the atom; isotopes; nuclear fission; nuclear reactions; chemical versus atomic explosions; the chain-reacting pile; production of plutonium; detection and measurement of nuclear radiation and incendiary effects of atomic explosions; atomic energy for peace-time uses; radioactive isotopes in agricultural, biological, and chemical research; and availability of materials for atomic energy.

Prerequisites: General college chemistry and general college physics, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 415 and 416. *Modern Chemistry*

This course offers a survey of the fundamental principles of chemistry and a study of recent developments. It emphasizes structures of chemical species, particularly the relationships of these structures to the chemical and physical properties of substances.

It is a two-semester course with one weekly class meeting lasting two hours. The course is held in conjunction with the Continental Classroom telecast of eighty lecture-demonstrations per semester. Class meetings involve discussion, lectures, demonstrations, evaluations, or experiments to supplement the television presentation.

Credit: 3 semester-hours

PHYSICS

GRADUATE COURSES

PHYSICS 501. *The Teaching of Physics in Secondary Schools*

This course satisfies the requirements in the teaching of physics for the limited secondary certificate. A study is made of the objectives, methods, and techniques of presentation, courses of study, lesson planning, instructional aids, and subject matter of high-school physics. Attention is given to the recent trends in developing apparatus and other equipment suitable for teaching the principles of physics. Assignments are made from recent literature on the outcomes of teaching of physics by television and by other visual aids.

Prerequisites: Sixteen semester-hours of work in physics

Credit: 3 semester-hours

PHYSICS 502. *Atomic and Nuclear Physics*

The course content is based upon the eighty telecasts of CONTINENTAL CLASSROOM (NBC-TV) and the text material, and is supplemented by guest lecturers on specific areas (e.g. radiation measurement, atomic piles, and nuclear accelerators), and laboratory experiences on the eight required meeting dates. The course content is about equally divided as to atomic physics and nuclear physics. Consideration is given to such subjects as: determination of particle mass and charge, isotopes, spectra, energy levels, electron optics, nuclear spin, the nature of radioactivity, scattering, detection, particle accelerators, mass spectroscopy, sub-atomic particles, nuclear piles, etc.

Prerequisites: General college physics or Physics 501

Credit: 4 semester-hours

PHYSICS 510. *Advanced Problems in Photography*

This course is intended to meet the needs of the camera club teacher and the hobbyist. The course includes negative and positive alterations, toning, printing processes, studio portraits, color photography, and photomicrography. The student is expected to submit prints of exhibition quality for public showing.

Prerequisites: General college physics, general college chemistry, and a first course in photography

Credit: 4 semester-hours

PHYSICS 512. *Modern Physics*

This course is a survey of recent experimental research in physics and of the newer theories concerning nuclear physics and electricity. Such topics as atomic spectra, radioactivity, artificial transmutation of the elements, and cosmic rays are discussed.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 513. *Nuclear Radiation*

A study of the nature of radiations is made. Particular attention is given to radiation measurement technique. The course is concluded with a study of health physics as related to radiation dosages and their effects. Some attention is paid to disposal of radioactive wastes, radiation protection, and safety precautions.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

PHYSICS 402. *Magnetism and Electricity*

The most important aims and purposes of the course are as follows: (1) to provide a substantial background of training in the fundamental laws and principles governing the generation and use of electricity; (2) to develop skill in manipulating laboratory and demonstration apparatus; and (3) to learn the basic principles of alternating current circuits.

This course consists of lectures, demonstrations, reference readings, written and oral reports, laboratory experiments with modern electrical instruments, and construction of simple electrical devices. Some of the topics studied are: modern concepts of the electronic structure of matter, electric forces, magnetic fields, potential, resistance, impedance, capacitance, and characteristics of thermionic vacuum tubes.

Prerequisites: PHYSICS 101 and 102

Credit: 4 semester-hours

PHYSICS 405. *Light and Optical Instruments*

Topics included for study in the classroom and laboratory are: the propagation of light; emission and absorption of radiant energy; reflection, refraction, polarization; spectrum analysis; photometric measurements; photoelectric cells; measurement of high temperatures; characteristics of illumination, modern illuminants; and industrial and domestic uses of light.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 406. *Astronomy*

This course is designed to acquaint the student with the celestial sphere, celestial motions, and the phenomena associated therewith; to make him aware of the principles of astronomy. It consists of a survey of the solar system, practical problems in locating and identifying celestial bodies, a consideration of light and matter, the basic laws of motion, the physical-chemical properties of the sun and stars, stellar scales and maps, the measurement of distance, the cosmology of the universe, the history of astronomical concepts, and the regularities, irregularities, and evolution of the solar system.

This study is aided by the use of selected films and slides, actual sky study and field trips, the use of the sextant, octant, transit, spectroscope, sky maps, planetaria, and telescopic observations.

Prerequisites: General college physics and chemistry

Credit: 4 semester-hours

PHYSICS 407. *Aviation*

This course deals with the historical development of aviation, air traffic rules, air-worthiness regulations, pilot certification, types of aircraft, aircraft structures, principles of aerodynamics, lift, drag, stability, motions of an airplane, piloting, motorless flight, aircraft engines, power performance, types of propellers, engine instruments, and flight instruments.

Field trips to airports and aviation industries are included. Flight experience is made available as a part of this course. Students who have taken PHYSICS 307 are not eligible to take this course.

Credit: 4 semester-hours

PHYSICS 408. *Advanced Aviation*

This course deals with the study of navigation; meteorology as applied to flight operations; radio communications; flight and navigational radio aids; instrument flight; air traffic control; jet, turbojet, and rocket flight; and recent advancements in aviation.

Prerequisite: PHYSICS 307 OR PHYSICS 407

Credit: 2 semester-hours

PHYSICS 409. *Basic Electronics*

This is an introductory course in basic electronic phenomena covering such topics as elementary circuit theory, electron emission, vacuum tube characteristics, vacuum tubes as circuit elements, and gaseous discharge. The use of transistors is also considered. Applications of electronics to instrumentation, radio, and television are introduced.

Prerequisites: General College Physics and Magnetism and Electricity

Credit: 4 semester-hours

PHYSICS 410. *Meteorology*

This course is designed to develop a fuller appreciation of our atmosphere with emphasis on the meteorological applications of physical principles. Consideration is given to weather elements; the temperature effects; air currents, air masses, and fronts; the collection, dissemination, and interpretation of weather data; and the general applications of meteorology. The student is expected to learn to use meteorological instrumentation, and emphasis is placed upon the improvisation of apparatus and equipment.

Credit: 2 semester-hours

PHYSICS 411. *Photography*

This course consists of laboratory work and field work supplemented by lectures and demonstrations. Emphasis is placed on physical principles in the construction of cameras, projection printers, tanks, and filters. Special attention is given to chemical principles in the development of films and paper, toning, intensification, and reduction.

Prerequisites: General physics and general chemistry or permission of the instructor

Credit: 4 semester-hours

PHYSICS 415. *Introduction to Modern Physics*

This course is designed to give the student a general view of the important advances in physics during the past fifty years. In the first part of the course considerable time is spent in the study of electron theory. Some of the topics considered are: the hydrogen atom, optical and X-ray spectra, natural radio-activity, cosmic rays, nuclear fission, new elements and isotopes, and particle accelerators. Some laboratory work is required.

Prerequisites: General College Physics, General College Chemistry, and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 416. *Introduction to Analytic Mechanics*

This course is a background course for science teachers. It includes some detailed treatment of the physics of classical mechanics, of the kinematics and dynamics of particles, and the dynamics of rigid bodies. The necessary mathematical methods of handling the data and theory are introduced and developed along with the course material. The course consists of lectures, discussions, demonstrations of practical application, and problem solving. There are two hours of lecture-recitation and four hours of laboratory work per week.

Prerequisite: General College Physics

Credit: 4 semester-hours

SCIENCE

GRADUATE COURSES

SCIENCE 505. *Science Seminar for Junior and Senior High Schools*

This course is designed to afford opportunity for graduate students in science, supervisors, and science teachers: (1) to investigate research in science education; (2) to organize science experiences and science information with teaching materials for the public schools. Each member of the group selects a project. This project must be presented to the science faculty and graduate students for evaluation.

Prerequisite: Certification to teach science or matriculation for the A. M. degree in science

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

SCIENCE 401D. *The Teaching of Aviation in Secondary Schools*

This course covers the study of State aviation programs, texts, bulletins, free material for school use, demonstration equipment, tests, working models, visual aids, and references needed to teach aerodynamics, aircraft engines, meteorology, navigation, and aircraft communication in high schools. Field trips to airports and aviation industries are included.

Credit: 2 semester-hours

SCIENCE 404. *Problems in the Teaching of Science*

When a student has completed the assignment in student-teaching in a public high school in the State of New Jersey and has accumulated some experience with the problems of high-school science instruction, he returns to the college campus for an intensive study of a limited number of problems in a single field of science. The student concentrates his attention on general science, biology, chemistry, or physics for this period. This course is mainly a study of the published investigations dealing with curriculum construction, evaluation of current practices in junior and senior high-school courses, and the psychology of learning in science.

Credit: 2 semester-hours

SCIENCE 405. *Field and Laboratory Studies in Science*

This integrated course is designed to show the relationship in the geological rock formations, the types of soil, water patterns, plant communities, and animal inhabitants in northern New Jersey, and the effects on human occupations. The field trips are for the pur-

pose of gathering data and materials for intensive work in the laboratory. The experiments are designed to give the student acquaintance with the science of common but possibly unstudied features of the landscape; e. g., soils are reproduced in profile and examined microscopically, physically, and chemically; water from a variety of sources is tested for biological and chemical impurities; the census of plant and animal inhabitants of typical areas is associated with relevant factors in the environment. Discussions precede and follow the field and laboratory work to establish the probable history of the area and to suggest the probable trend, whether advancing or retrogressing, of its development. Stress is placed on the kinds of human control in specific communities which would best serve their progress.

Students are asked to submit an analysis of the geological and biological features of some known community, based on the skills and principles learned. Some other objectives of the course include an understanding of the organization of school museums for learning purposes, the making of ecological maps and illustrating them with photographs and diagrams, and the techniques of ecological field trips. Two instructors, a chemist and a biologist, collaborate in giving this course.

Prerequisite: Proficiency in biology and chemistry

Credit: 4 semester-hours

SCIENCE 409. *Senior High School Physical Science Demonstrations*

This course furnishes teachers of the physical sciences with demonstrations and experiments designed for work in high-school chemistry, physics, and applied physical science courses. A detailed study of demonstrations is made with emphasis on visibility and avoidance of failure. Emphasis is placed on sources of new demonstrations for the teacher.

Credit: 2 semester-hours

SCIENCE 410. *Junior High School Science Demonstrations*

This course covers the methods of experimental instruction in grades seven, eight, and nine. A detailed study is made of about three hundred demonstrations.

Credit: 4 semester-hours

SCIENCE 411. *Problems in Field Studies in Science*

In this course each student selects a phase of field science in which he does advanced research under the guidance of the instructor. Plant ecology, bird-life, pond life, fungi, tree diseases, and insect life are a few of the areas from which the student may choose.

Prerequisites: Field Studies in Science or its equivalent plus at least 12 points of biology

Credit: 2 semester-hours

SCIENCE 412. *Field Studies in Science: Biological*

Extensive instruction in the identification and natural history of fauna and flora is given in this course. Students examine the ecology of plant and animal communities (terrestrial and aquatic) and relate such communities with man's use of natural resources. The relation of field activities to present school curricula is considered. No previous science courses are required.

Credit: 2 semester-hours

SCIENCE 413. *Field Studies in Science: Physical*

Emphasis in this course is given to local and New Jersey geology, minerals, soils, and waters, with emphasis on the chemical and physical aspects of soil and water. Field trips are taken through the Kittatinny Mountains and to the Delaware Water Gap.

Credit: 2 semester-hours

SCIENCE 414. *Conservation of Plants and Animals*

The social, economic, and ecological implications of plant and animal conservation are considered together in this course. Discussion periods are interspersed with field trips to forest and wildlife management areas. Co-operating experts from State and Federal agencies bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 415. *Conservation of Soil and Water*

The social, economic, and ecological implications of soil and water conservation are considered together in this course. Discussion periods are interspersed with field trips to selected areas. Outside experts bring special contributions in their fields. Visual aids are used extensively.

Credit: 2 semester-hours

SCIENCE 418. *Three Centuries of Science Progress*

This course includes a study of fundamental world changes that have resulted in the past three hundred years from scientific discoveries. Topics considered are the following: a background of the beliefs and practices of the age; the processes of thought which produced skepticism; the experiments devised to disprove ruling opinions; the new concepts arising from fresh evidence; and the social, economic, and philosophic adjustments following the discoveries. Stress is given to the nature of scientific inquiry, its cumulative nature, its desire for freedom, and how to judge the probable fruitfulness of a research problem. The role which the man

of science occupies in the world today is contrasted with his counterpart in earlier centuries. Class demonstrations of historical experiments, readings in the original literature, and lectures and discussions are employed by the three or more science teachers of the course.

Credit : 2 semester-hours

SCIENCE 419. *Field Science and Conservation*

In this course students study phases of field science which are related to conservation. The components of soil and water which produce good crops are studied. Students gain an understanding of farm practices by visiting several nearby farms. Forest and wood-lot management, wildlife preservation, mineral resources use, and other important areas in which science influences the conservation of natural resources are investigated.

Credit : 2 semester-hours

SCIENCE 420. *Water Supply and Conservation Problems*

This course is designed to provide students with an opportunity to do an extensive study of the water supply problems in New Jersey and surrounding states. A study of water tables, rainfall, irrigation, drainage, flooding, water shed management, stream pollution, and soil erosion, gives students a background for understanding the problems involved in domestic and industrial use of water. State and regional water conservation projects such as Incodel, Passaic Valley Flood Control, and Stoney Brook Watershed are studied. Teaching materials are supplied, and methods of presenting this material to elementary and secondary pupils are demonstrated and discussed.

Credit : 3 semester-hours

SCIENCE 421. *Water Analysis and Purification*

This course covers the phases of water inspection, analysis, and purification of value in safeguarding public and private water supplies, and in securing potable water from questionable sources. The work consists of class discussions, field trips, and laboratory experiences. Field trips are to water purification plants, sewage disposal plants, and board-of-health laboratories. The laboratory work is divided between the fields of chemical and bacteriological analysis of water. The necessary bacteriological background is developed in the course. Chemical analysis includes tests for harmful impurities and hardness.

Prerequisites : CHEMISTRY 101 and 102

Credit : 4 semester-hours

DEPARTMENT OF SOCIAL STUDIES

The teacher of social studies works in a field the boundaries of which are constantly changing and expanding. The necessity for constant study, especially with regard to the contemporary social situation and its problems, presses upon every secondary school teacher of the social studies. The Social Studies Department at Montclair intends to provide for such teachers courses of an advanced character which will help to keep them abreast of the changes in a changing world. It also will provide advanced courses for those teachers who wish to increase their preparedness in specialized secondary school subjects. Finally, it aims to provide for the teacher-in-service an opportunity for keeping informed concerning the changing techniques and problems of teaching the social studies. Selections from advanced courses of the sort just described lead to the Master's degree in the social studies.

In order to qualify for the Master's degree in social studies, candidates will either prepare a thesis or pass an oral examination based upon a selected field of research.

REQUIREMENTS IN THE SOCIAL STUDIES DEPARTMENT

In general, a candidate must offer thirty-two hours of graduate credit, at least eighteen of which must be in the field of Social Studies, six in the field of Education, and six or eight (depending upon the number of social studies credits required) elective credits in fields closely related to the social studies. The following are the more specific requirements:

- I. All candidates must take a seminar course, either SOCIAL STUDIES 502 or SOCIAL STUDIES 518. A candidate *may* offer both these seminars since the subject-matter content, aside from the instructions in research, is different in both courses.
- II. The remaining social studies courses should represent a diversified choice from among the following fields:

Ancient and Medieval History

Social Studies 422, 423, 425, 426, 427, 473

Modern European History

Social Studies 414, 441, 448, 457, 458, 493, 506

United States History

Social Studies 408, 413, 419, 438, 447, 471, 474, 475, 480

The Americas

Social Studies 415, 435A, 435B, 440A, 440B, 453B

International Affairs

Social Studies 412, 434, 442, 451

Economics

Social Studies 446, 450A, 450B, 456, 517, 522, 523, 524

Sociology

Social Studies 429, 439, 443, 444, 476, 477, 494, 512, 513

Political Science

Social Studies 430, 433, 437, 515

Philosophy

Social Studies 403, 404

Educational Techniques

Social Studies 503

Credits may also be chosen to the amount of six from the offerings in Field Studies, China Institute, Workshop in Citizenship Education, and United Nations Institute.

- III. All candidates must take the course, EDUCATION 503—*Methods and Instruments of Research*, and four elective credits chosen preferably from the following:

Education 500B, 504A, 505, 550, 440

- IV. Elective credits in fields other than the social studies should be chosen from among the following:

Education 408, 410

English 402, 404, 432, 533, 536, 537, 545A, 545B

Business Education 409, 412

Geography 406, 408A, 408B, 409, 410, 411, 412, 413, 414A, 414B, 416, 418, 419, 420, 503, 504, 509

- V. *Master's Thesis or Research Paper*

All candidates are required to complete either a Master's thesis or a Master's essay on a question or problem which has been chosen by the candidate for his specialization. The candidate is given an oral examination on the paper before a seminar of members of the Social Studies Department. Complete directions for this requirement may be obtained from the chairman of the department.

In the case of candidates offering undergraduate majors from institutions other than Montclair, it may be necessary to make more specific requirements with respect to choices among social studies and elective credits than is indicated above in order to fill gaps which may exist in the undergraduate major.

GRADUATE COURSES

SOCIAL STUDIES 502. *The Origin and Development of the American Constitution*

This course is an intensive study of the origin and framing of the Constitution of the United States. It aims to search out the roots and influences that determined our basic political institutions. The seminar method is employed and attention is given to the techniques of historical research and historical writing.

Credit: 2 semester-hours

SOCIAL STUDIES 503. *Modern Social Studies Instruction and Supervision*

This course is designed primarily to assist teachers and supervisors to obtain a comprehensive view of recent curriculum trends, current subject-matter tendencies, and newer practices in secondary school social studies. Topics discussed include: materials, methods, and techniques; use of audio-visual aids; courses of study and experimental problems; professional literature; and problems of the critic teacher and the supervisor.

Credit: 2 semester-hours

SOCIAL STUDIES 506. *The British Empire from 1783*

This course deals with the evolution of the British Empire from the period of the old Colonial system to the present British Commonwealth of Nations. The rise of dominion government, the forces of anti-imperialism, and the various solutions suggested from the improvement of imperial relations are stressed.

Credit: 2 semester-hours

SOCIAL STUDIES 512. *Social Legislation*

This course analyzes the social, economic, and political adjustments which have come about in our society due to technological progress.

Credit: 2 semester-hours

SOCIAL STUDIES 513. *Education and Intercultural Relationships*

Within our nation as within the world, along with common needs and interests, there exist differences between groups and individuals which act as barriers to satisfying human relationships. This course is devoted to a consideration of these barriers and of common interests and needs which exist in spite of such barriers. We study not only the existence of such conditions but also the attitudes, principles, and techniques which may make for better human relationships.

Credit: 2 semester-hours

SOCIAL STUDIES 515. *History of Political Thought*

The major theories of representative political philosophers concerning the nature, functions, organization and sovereignty of the state are studied in this course. Among those discussed are: Plato, Aristotle, Cicero, Thomas Aquinas, Machiavelli, Luther, Calvin, Bodin, Hobbes, Locke, Spinoza, Montesquieu, Rousseau, Hume, Bentham, J. S. Mill, Burke, Hegel, Marx.

Credit: 2 semester-hours

SOCIAL STUDIES 517. *Money and Banking*

An opportunity is provided for an analysis of the monetary and banking principles and practices basic to modern economic organization. Consideration is given to the various theories of money, the relation of money to prices, banking systems and their operation, and the nature and significance of credit. Special attention is directed to an examination of the functioning of the Federal Reserve System in relation to the gold standard, a managed currency, stability, inflation and deflation.

Credit: 2 semester-hours

SOCIAL STUDIES 518. *Recent Trends in American History (1918 to the Present)*

Without attempting to reach final conclusions, this course analyzes the major problems which have influenced American life since the First World War. The new position of the nation in world affairs, the modifications of the old economic order, the progress of social and political change are all surveyed. This course, like SOCIAL STUDIES 502, is conducted by the seminar method and may be taken instead of that course. As the subject matter is different, except for the instruction in methods of research, both courses may be taken.

Credit: 2 semester-hours

SOCIAL STUDIES 522. *The Development of Economic Institutions and Ideas*

This course deals with the changing principles, institutions and ideas which determine the character of economic society. The doctrines of the more important schools of economic thought such as the Classical, Historical, and Institutional groups are emphasized, and the teachings of the Mercantilists, Physiocrats, Adam Smith, Malthus, Ricardo, Marx, Henry George, Veblen, Hobson, Commons, Keynes, and others are examined in relation to the important problems of money, credit, prices, business cycles, foreign and domestic commerce, property, wages, the nature of wealth and value, and economic planning.

Credit: 2 semester-hours

SOCIAL STUDIES 523. *The Economics of the Business Cycle*

The purpose of this course is to consider the nature of business cycles and their impact on the national economy, to survey business cycle theories, and to analyze the significant proposed methods of control for the purpose of developing a desirable public program conducive to economic stability.

Credit: 2 semester-hours

SOCIAL STUDIES 524. *The Economics of Public Fiscal Policy*

This is a course for the mature student interested in the effect of government tax policies on the national economy. Consideration is given to the various theories of justice in taxation: the incidence and shifting of the tax burden; the constitutional aspects of government finance; fiscal policy and full employment; taxation and economic inequality; the economics of public borrowing; and management of the national debt. Particular emphasis is placed on the conflicting issues which have arisen from the increasing encroachment of public finance on both business and the consumer due to war and recurrent depressions. Attention is also given to such special programs as the Marshall Plan and aid to underdeveloped economic areas.

Credit: 2 semester-hours

SOCIAL STUDIES 525. *Workshop on Economic Education*

This workshop is designed to provide teachers, supervisors, and administrators with a better understanding of the American economy and its operation. Instruction is given by a staff of economists and curriculum specialists, supplemented by businessmen, labor leaders, and representatives of agricultural groups. Workshop committees with the help of specialists prepare syllabi and teaching materials. Special library facilities are provided as well as selected teaching aids and field trips.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions see the undergraduate catalog.

ANCIENT AND MEDIEVAL HISTORY

SOCIAL STUDIES 422. *Greek Civilization*

The aim of this course is to present the development of Greek civilization from the earliest period to the beginning of the Christian era.

Credit: 2 semester-hours

SOCIAL STUDIES 423. *Roman Civilization*

This course traces the social changes in Rome from the earliest times to the end of the Western Roman Empire. The rise and fall of the empire are discussed with relation to their importance in medieval civilization.

Credit: 2 semester-hours

SOCIAL STUDIES 425. *Medieval Civilization*

This course covers the period from the decline of Rome to about 1500. It first emphasizes the blending of barbarian cultures with that of the Roman resulting in feudalism as a way of life. After that a study is made of the gradual evolution of towns, a trade and industrial economy on a broadening scale, the emergence of monarchical states, an intellectual awakening with the founding of universities, all of which leads finally to our modern system of national states.

Credit: 3 semester-hours

SOCIAL STUDIES 426. *Medieval History to 1498*

In the first part a study is made of the factors contributing to the political breakdown of the imperial principle, such as the growth of Christianity, barbarization of the West, and the expansion of Islam. The second part is devoted to the developments in Western Europe after 1200, stressing political movements, medieval commerce, guilds, growth of towns, and cultural changes.

Credit: 4 semester-hours

SOCIAL STUDIES 427. *Ancient History to 378 A. D.*

The first part of this course covers the Oriental period and the Greek through the Periclean Age. The second part covers the Hellenistic period from the rise of Philip of Macedon, stressing attempts at federalism.

Credit: 4 semester-hours

SOCIAL STUDIES 473. *The Arts in Western Civilization*

This course is designed to show how the social, economic, political, and religious movements in Western Civilization influenced the aesthetic expression of Europe from the Golden Age of Greece to the Rise of the Industrial Revolution. Greek, Roman, Byzantine, Gothic, Baroque, and Rococo art, architecture, and music are discussed and illustrated.

Credit: 2 semester-hours

MODERN EUROPEAN HISTORY

SOCIAL STUDIES 414. *Modern England*

This course deals both with the historical periods as such and with the influences of the political, economic, and social forces in the English literature of the century. The Napoleonic era, political reform, factory reform, the humanitarian movement, the Irish question, the ministries of Gladstone and Disraeli, and the interpretation of politics and literature are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 441. *Economic History of Europe*

The study of Europe from an economic point of view is particularly important in the light of present European problems and their relation to world-wide conditions. This course is a survey of the economic life and development of Europe from the emergence of the ancient civilizations to the beginning of the modern economic world.

Credit: 2 semester-hours

SOCIAL STUDIES 448. *The British Dominions*

This course deals with the role Canada, Australia, New Zealand, and South Africa are playing in present world affairs. Special emphasis is given to Canada and its dual position as an American state and a part of the British Empire.

Credit: 2 semester-hours

SOCIAL STUDIES 457. *Development of Russia*

Factors which have shaped the evolution of the Russian people, such as Byzantinism and the Greek Orthodox faith, the Synod, Tartar state organization, the Mir, Westernization from Peter to Lenin, Slavophilism, and dialectic materialism, are emphasized.

Credit: 2 semester-hours

SOCIAL STUDIES 458. *Russia as a World Power*

An analysis of Russia's relations with China, Iran, Turkey, the European continent, England and the United States is presented. Marxist world policy, as interpreted by Kautsky, Plekhanov, Jaures, Bukharin, Trotsky, Lenin, and Stalin, is described.

Credit: 2 semester-hours

SOCIAL STUDIES 493. *Western Europe Since World War I*

This course presents an outline of the rise of communism and fascism and the reaction of the western democracies to these movements. The Civil War in Spain, the Munich Pact, the failure of the League of Nations, diplomatic events of the World War II era, United Nations problems, the North Atlantic Pact, and special problems of western defense are emphasized. An evaluation of western Europe's significance for the United States is attempted.

Credit: 4 semester-hours

UNITED STATES HISTORY

SOCIAL STUDIES 408. *A History of New Jersey*

This course is designed to assist teachers in acquiring a better knowledge of their state. A study is made of the history of New Jersey from the point of view of the social, political, economic, and cultural development of the people from the beginning of settlement to the present. Special attention is given to the geographical and industrial aspects of the state, and the place of New Jersey in the national setting.

Credit: 2 semester-hours

SOCIAL STUDIES 413. *Economic History of the United States*

The great trends and movements in agriculture, finance, commerce, manufacturing, transportation, and industrial relations are traced from their beginnings in the colonial period to their contemporary expressions in the present crisis.

Credit: 2 semester-hours

SOCIAL STUDIES 419. *American Political Biography*

This is the study of the life and influence of the leading figures in American political and social history. It is the aim here to show the relation of each of these characters to the times in which he lived and to point out how he influenced the trend of American life. The study includes such leaders as Washington, Jefferson, Hamilton, Webster, Lincoln, Cleveland, T. Roosevelt, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 438. *The Literature of American History*

A brief description of the material available for the study of American history is followed by class practice in finding and using the primary sources of some of the facts commonly taught in schools.

Credit: 2 semester-hours

SOCIAL STUDIES 447. *Diplomatic History of the United States*

The purpose of this course is to show how we have become gradually conscious of our world interests and responsibilities, and the important role we have come to play in international politics.

Credit: 2 semester-hours

SOCIAL STUDIES 471. *The United States Since World War I*

This course surveys the major problems, economic, social, political, and international, which have marked our national development since the end of the first World War. It is intended especially for social studies seniors as a preparation for the second year of secondary school American history as provided for in the recently adopted state requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 474. *America in Transition*

This course surveys rapidly the results of the Civil War and then emphasizes the major trends, economic and social, which have made modern America. It is intended as a more advanced study than that which is made in the undergraduate course. The period covered is from 1867 to around 1914.

Credit: 2 semester-hours

SOCIAL STUDIES 475. *The History of American Thought*

This course considers the influential thinking in America from the Mayflower Compact to the Marshall Plan to see how certain ideas or trends of thought have grown out of situations and have in turn helped to mould the course of our history. The student should gain an appreciation for the American contribution to world culture, and an examination is made of outworn stereotypes which exist today. The writings and discourses of important American thinkers are considered including Mather, Paine, Jefferson, Emerson, Thoreau, and Veblen.

Credit: 2 semester-hours

SOCIAL STUDIES 480. *Social History of the United States*

This course presents a study of the social and cultural aspects of American history. As such, it supplements but does not take the place of economic and political history. The course considers population movements and growth, rural and urban social problems, status of women, family life, utopian ventures, mass media of communication, amusements and recreation, and human rights.

Credit: 2 semester-hours

THE AMERICAS

SOCIAL STUDIES 415. *Latin-American Relations of the United States*

This course aims to provide the information necessary to a clear understanding and accurate appreciation of the political, economic, and social relations that have developed between us and our Latin-American neighbors.

Credit: 2 semester-hours

*SOCIAL STUDIES 435A. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part I*

This course deals specifically with the relations of the United States and the Caribbean countries. Attention is given to the dependencies of the United States in this region as well as to the independent republics. Twentieth Century political, economic, and cultural developments of this region are stressed in light of the inter-American system.

Credit: 2 semester-hours

*SOCIAL STUDIES 435B. *The Americas: A Contemporary Political, Economic, and Cultural Survey, Part II*

This course deals specifically with the Twentieth Century political, economic, and cultural life of the South American nations. The role which the South American states play in world affairs is stressed. Attention is given to post-World War II developments and adjustments in South America.

Credit: 2 semester-hours

*SOCIAL STUDIES 440A and 440B. *The Development of Central and South America as Colonies and Nations*

The first part of this course surveys the period of exploration and settlement in the colonies of South and Central America. The second part studies the experiences of the various Latin-American nations under different forms of government.

Credit: 2 semester-hours each

SOCIAL STUDIES 453B. *The Development of Canada*

This course is devoted to the study of the historical background, geographical environment, governmental organization, economic behavior, and social conditions of the northern neighbor of the United States. Its professional objective is to provide the understanding and appreciation necessary to the student and teacher who may follow and interpret the growth, internal and external, of the Dominion of Canada and of its relation to the United States as well as to the British Commonwealth of Nations.

Credit: 2 semester-hours

INTERNATIONAL AFFAIRS

SOCIAL STUDIES 412. *International Government*

The attempts of the international community of states to express itself in a formal world organization are the subject of this course. The agencies which have been established to deal with international legislative, executive, administrative, and judicial problems are studied.

Credit: 3 semester-hours

SOCIAL STUDIES 434. *Contemporary World Affairs*

This course is devoted to a survey of the leading diplomatic, economic, political, and military issues before the world today. The backgrounds from which these international affairs have evolved are reviewed.

Credit: 2 semester-hours

SOCIAL STUDIES 442. *The Far East*

A study is made of the economic, social and cultural situation of the Far East, with particular emphasis on the historical background of China and Japan, and on our relations with the Philippines.

Credit: 2 semester-hours

* Note: Courses 435A, 435B, 440A, and 440B are independent courses; none is prerequisite for another.

SOCIAL STUDIES 451. *The Middle East*

This course is a survey of Indian and Moslem civilizations. Post-war planning for the region from the Near East through Persia, India, Burma, Thailand, and Malaya to the Netherland East Indies is discussed.

Credit: 2 semester-hours

ECONOMICS

SOCIAL STUDIES 446. *Current Problems in Economics and Government*

This course is designed to analyze the relationship of economics to government. The causes and results of governmental activities are discussed in the light of their economic significance and their bearing on public welfare.

Credit: 2 semester-hours

SOCIAL STUDIES 450A and 450B. *Modern Economic Problems and Policies*

The purpose of this course is to contribute to the general need for increased knowledge in the area of economic relationship, using the problem approach method of analysis. 450A begins with a brief recapitulation of the overall functioning of the economic system, after which the class proceeds to a detailed study of our broader economic problems and the public policies relating to them. Specifically, the problems are those relating to population and natural resources, the economic functions of government, the measurement of economic activity, monetary stability, basic banking problems, business cycles, marketing trends, economic inequality, and social security. 450B considers those problems associated with the world economy, international trade and exchange, monopoly and its regulations, the problems concerned with the control of public utilities, emergency price regulation and economic stabilization, labor problems, the problems of public finance, the public debt and fiscal policy, and, finally, the nature of comparative economic systems and their relations with each other.

Credit: 4 semester-hours

SOCIAL STUDIES 456. *International Economic Relations*

The purpose of this course is to study the significance of international trade and exchange to the economic life of our nation and to the world economy.

Credit: 2 semester-hours

SOCIAL STUDIES 482. *Conservation and Rural Economic Life*

This course provides for a study of one of the basic economic problems in America today. Land use, farm loans, price support of farm products, increased acreage production, conservation practices, are among the topics studied to give the student a better understanding of the relationship between rural and urban living. Trips are arranged to nearby farms, dairy cooperatives, farm bureaus, banks, and town meetings.

Credit: 2 semester-hours

SOCIOLOGY

SOCIAL STUDIES 429. *Present-Day Social Problems*

Beginning with a survey of levels of living in the United States and their relation to the distribution of wealth and income, this course proceeds with a study of poverty and crime, their sources, treatment, and prevention.

Credit: 2 semester-hours

SOCIAL STUDIES 439. *The Family and Its Problems*

This course gives a history of the family, our American family patterns, the effects of social change, marital patterns of interaction, social roles, sources of conflicts and frustration, divorce and desertion, special problems in family life, economics of children and the home, social legislation pertaining to family problems, marital adjustments, personality change after marriage, parent-child relationships, and personality reorientation.

Credit: 2 semester-hours

SOCIAL STUDIES 443. *Youth and the Community*

This course is a sociological study of youth in its many relations to the community. Special attention is given to problems which arise in the relationship of youth and the community; e. g., juvenile delinquency, conditions contributing to maladjustment, poorly adjusted children, and educational and social agencies active in solving youth behavior.

Credit: 2 semester-hours

SOCIAL STUDIES 444. *The Social Bases of Human Relations*

This course emphasizes the social bases of human nature and personality. Primary and secondary groups, folkways, mores, and institutions are considered.

Credit: 2 semester-hours

SOCIAL STUDIES 476. *Personality Development and Group Relations*

A study is made of personality growth through social contacts, the environmental factors found in the home and family, neighborhood, play, and school groups. Methods of measuring the place of the individual in the group, analysis of the group process, ways of bringing about better life adjustment, and integrating experiences are the subject matter of the course. Concrete cases of maladjustment to society and disintegrated personality are studied. Agencies in the community which serve youth are visited, and leadership in community group activities is recognized as part of the course requirements.

Credit: 2 semester-hours

SOCIAL STUDIES 477. *Rural Sociology*

During this course the student comes face to face with rural life in northern New Jersey. Social processes and problems are considered. Opportunities are provided for students to attend Grange meetings, county fairs, rural dances and parties, and to live for a day or two with a farm family.

Credit: 2 semester-hours

SOCIAL STUDIES 483. *Modern Approaches to Social Problems*

This course is designed to acquaint students with techniques and practices developed in recent years for a scientific approach to problems of human relationship. Techniques to be studied include: sampling techniques for testing large groups, questionnaires, interviewing techniques, objective observation of culture patterns, objective observation in controlled laboratory situations, sociometrics, role-playing techniques, attitude testing, and use of semantic analysis in test construction. Students become acquainted with these techniques through the study of a variety of recent reports. The selection of items to be studied depends on the needs and interests of class members. This course is designed to aid in the development of attitudes and practices which make possible the use of a modern, scientific approach to social problems.

Prerequisite: An introductory course in sociology or special permission of the instructor

Credit: 2 semester-hours

SOCIAL STUDIES 494. *Social Studies and Conservation*

Everyday problems of living as they are related to and affected by the wise use of our natural resources are studied in this course. The student learns about the renewable resources, soil, water, forests, and wildlife, as well as the non-renewable resources, minerals, oil.

and coal. Economic, social, community, national, and individual problems are approached by giving the student first-hand experiences gained through extensive field trips in northern New Jersey. This course is of particular interest to social studies and elementary school teachers but also forms an excellent experience background for all educational fields. Methods of teaching, courses of study, and teaching units are developed.

Credit: 2 semester-hours

POLITICAL SCIENCE

SOCIAL STUDIES 430. *The Citizen and the State*

This course is designed to help any citizen become better acquainted with the many organizations by and through which our complex society manages itself. The emphasis is placed on government and political organizations, but the course also includes a study of the many other organizations of the community, the county, and the state that have to do with directing policy and maintaining controls. The aim of the course is to encourage intelligent appreciation and participation rather than simply to accumulate academic information. Consideration is also given to the ways in which such working knowledge can become a part of the experience of the pupils in our schools.

Credit: 2 semester-hours

SOCIAL STUDIES 433. *American Political Thought*

This course deals with contemporary trends and theories as they have emerged from social and economic conditions and as they are founded upon the bases laid down by such men as Hamilton, Madison, Washington, Jefferson, Marshall, Calhoun, Webster, Lincoln, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 437. *The Political Party System in the United States*

Among the topics discussed are: party organizations, the political boss, the political machine, party finances, the process of voting, election laws, primaries, conventions, platforms, presidential elections, majority rule, the development of the party system, sectional politics, the farm vote, the labor vote, and the future of party government in the United States.

Credit: 2 semester-hours

PHILOSOPHY

SOCIAL STUDIES 403. *Seminar in Social Studies—Basic Issues in the Social Studies*

This offering is designed for social studies majors when they return from student teaching. As its title suggests, the course is built around issues which have long been considered fundamental to an understanding of American democracy.

Credit: 2 semester-hours

SOCIAL STUDIES 404. *The Philosophy of History*

It is the purpose of this course to investigate the relation of history to the other social studies and also the major attempts to find the meaning of history. A brief survey is made of the leading philosophies of history.

Credit: 2 semester-hours

FIELD STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 460. *Central Eastern Region*

This fifteen-day tour of Pennsylvania, Maryland, Virginia, West Virginia, North Carolina, and Tennessee covers the major points of historic interest associated with the Colonial Period, the American Revolution, and the Civil War, and the geographic features of the coastal plain, the Piedmont, the Great Valley, and the Appalachian Mountains in these states. Travel is by modern chartered motor coach, and overnight stops are made at first-class hotels. Among the places visited are: Valley Forge, Philadelphia, Baltimore, Annapolis, Washington, Arlington, Alexandria, Mt. Vernon, Fredericksburg, Richmond, Washington's birthplace at Wakefield, Lee's plantation at Stratford, Yorktown, Williamsburg, Jamestown, Raleigh, Chattanooga, Asheville, Great Smoky Mountains, Norris Dam, Jefferson's Monticello at Charlottesville, Natural Bridge, Skyline Drive in the Shenandoah National Park, Luray Caverns, Winchester, Harper's Ferry, Frederick, Gettysburg, and the Pennsylvania Dutch area around Lancaster and Ephrata.

Credit: 3 semester-hours

SOCIAL STUDIES 461. *New England and French Canada*

This field study course gives an opportunity to study by direct observation the historical and geographical features of New England and the Province of Quebec. The trip, occupying the twelve days immediately following the summer session, is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers the lower Connecticut Valley, including Hartford, Springfield, Northampton, and Deerfield; the Rhode Island cities of Providence and Newport; historic Massachusetts towns such as Plymouth, Boston, Lexington, Concord, Salem, and Marblehead; the coast of New Hampshire and southern Maine; the White Mountains in the Mt. Washington and Franconia Notch area; the Canadian Province of Quebec, including the ancient French city of Quebec, Montmorency Falls, St. Anne de Beaupré, Montreal; the western shores of Lake Champlain, Lake George, and the Hudson River. It is an indispensable background for an understanding of Colonial and Revolutionary life and history in this region.

Credit: 3 semester-hours

SOCIAL STUDIES 462. *Continental United States*

This field study course consists of sixty-two days of directed travel, including all of July and August, and provides an opportunity for gaining an integrated view of our country as a whole. The trip is made in a modern chartered motor coach with overnight stops at first-class hotels. The route covers about 12,500 miles and visits 26 states and 6 National Parks. Among the major points of interest are Gettysburg, Natural Bridge, Blue Ridge and blue grass region, Mammoth Cave, Lincoln shrines in Kentucky and Illinois, Dodge City, Royal Gorge, Pikes Peak, Denver, Rocky Mountain National Park, Taos and other Indian Reservations, Santa Fe, Petrified Forest, Painted Desert, Grand Canyon, Bryce and Zion National Parks, Hoover Dam, Los Angeles, Hollywood, San Diego, San Juan Capistrano and other Missions, Tia Juana, Santa Barbara, Sequoia and Yosemite National Parks, Monterey, San Francisco, Sacramento, Lake Tahoe, Reno, Donner Pass, mammoth redwood groves, Crater Lake, Columbia River Valley, Portland, Seattle, Mt. Rainier, Grand Coulee Dam, Spokane, Butte, Yellowstone National Park, Salt Lake City, pioneer trails of Wyoming, Black Hills, Chicago, Detroit, Toronto and Niagara Falls. All important geographic and historical features are studied under the instruction of members of the college faculty and local specialists. Write for detailed descriptive folder.

Credit: 10 semester-hours

SOCIAL STUDIES 466. *Puerto Rico and the Virgin Islands*

This is a nine-day field study course devoted to a survey of our nearest island possessions. It includes a rather thorough exploration of San Juan and its vicinity, including the University, the rain forest and the submarine gardens, a two-day trip through the island visiting pineapple, coffee, sugar, textile, and rum producing areas, churches, homes, and historic places. One day is spent in St. Thomas, largest of the Virgin Islands. The trip to and from the islands is made by air. It is usually offered during the Christmas holidays.

Credit: 2 semester-hours

SOCIAL STUDIES 467. *Florida*

This is a field-study course covering the Florida peninsula including both coasts, the Everglades, and the Lake Region. Among the places visited are ancient St. Augustine; the winter playgrounds at Palm Beach and Miami; the Tamiami Trail through the Everglades; the west coast cities of Sarasota, St. Petersburg, and Tampa; and the Lake Region in the neighborhood of Lake Wales and Orlando. The trip affords opportunity for topographical, historical, and industrial studies. It is usually given during the Easter vacation.

Credit can be given for only one of the following courses: SOCIAL STUDIES 467 and 484.

Credit: 2 semester-hours

SOCIAL STUDIES 469. *Mexico*

This field-study course aims to give a comprehensive view of contemporary Mexican life with its geographic, economic, historic, and cultural setting. Transportation to and from Mexico City is by air and in Mexico by private cars. Overnight stops and meals are at the best hotels. Places visited include Xochimilco, Acolman, Teotihuacan, Fortin, Puebla, Oaxaca, Guadalajara, Queretero, Guanajuato, Patzcuavo, San Miguel de Allende, San Jose Purua, Morelia, Toluca, Taxco, and Cuernavaca. The itinerary is carefully planned to include all points of major interest and significance. Special studies may be made in the fields of geography, history, art, architecture, archaeology, sociology, economics, and other fields.

Credit: 3 semester-hours

SOCIAL STUDIES 481. *The West Indies*

This course consists of ten days of directed travel in five countries in the Caribbean region. Transportation is by air and private cars with overnight stops at the best hotels. Opportunities are given for study of geographic, historic, economic, and cultural phenomena in Puerto Rico (one day), Santo Domingo (two days), Haiti (two

days), Jamaica (two days), Cuba (two days), visiting San Juan, Ciudad Trujillo, San Cristobal, Port au Prince, Kenscoff, Kingston, Havana, and rural areas in all countries.

Credit: 2 semester-hours

SOCIAL STUDIES 484. *Gulf Coast and Lower Mississippi Valley*

This is a nine-day field-study course covering the Gulf Coast from Mobile to New Orleans. It also surveys the economic, geographic, and historical aspects of the lower Mississippi Valley visiting among other places Mobile, Biloxi, New Orleans, Baton Rouge, Natchez, Vicksburg, and Jackson.

Credit can be given for only one of the following courses: Soc. St. 467 and 484.

Credit: 2 semester-hours

SOCIAL STUDIES 485. *Maritime Provinces of Canada*

This is a twenty-one day field study course covering Nova Scotia, Cape Breton Island, New Brunswick, and the Gaspé. The route runs through Vermont and Quebec to the Gaspé. It covers Nova Scotia and Cape Breton Island thoroughly, including the spectacular Cabot Trail, and returns through Maine, New Hampshire, Massachusetts, and Connecticut. Among the places visited and topics studied are: Rivière du Loup; picturesque fishing villages along the river and Gulf of St. Lawrence; lumbering and pulp-wood operations; Gaspé; Percé with its bird sanctuary; Moncton, New Brunswick, with its tidal bore; St. John, New Brunswick, with its reversing falls; Truro; Digby; Grand Pré; Annapolis Royal; Lunenburg; Halifax; Sydney; Louisbourg; Cape Breton Highlands National Park. The history of the conflicts between the French and the English for this territory, the varied geographical and scenic phenomena, and the customs and daily life of the French Canadian and English-speaking people of the region are observed.

Credit: 3 semester-hours

SOCIAL STUDIES 486. *World Survey*

This is a thirty-five day field-study course planned to give the student a comprehensive, though not detailed, vision of the kind of a world we live in with its varying culture patterns and problems. The fact that the globe can be circled and sampled in such a short time is in itself evidence of the necessity for a world point of view on the part of teachers. The itinerary covers the Tokyo and Kamakura area in Japan; Manila and its environs in the Philippines; Hong Kong, and the Kowloon Peninsula in southeast China; Bangkok in Thailand; Calcutta, Delhi, Agra and Bombay in India; Cairo and Memphis in Egypt; Jerusalem and Damascus in the Holy Land; Baalbeck and Beirut; Istanbul; Athens, and Corinth; and Rome.

Credit: 4 semester-hours

BACKGROUND STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 492A and B. *Studies in American Life—The East and the West*

These courses comprise a unit designed to give the student an integrated understanding of the United States as a cultural, historic, geographic, social and political unit and, at the same time, an appreciation of the regional differences which characterize American unity in diversity. It should be useful to those who have traveled, to those who intend to travel, and to those who, although they cannot travel, wish to broaden their knowledge of our country. The geography, the history, the literature, the art, the music, the architecture, the people, the manners and customs, the flora and fauna, the economic, social, and political problems, and the significant personalities of the regions studied are discussed and illustrated with slides, films, and other audio-visual materials. Either course may be taken without the other.

The subject matter of SOCIAL STUDIES 492A covers New England, the Central East, the South, and the Middle West east of the Mississippi River. The subject matter of SOCIAL STUDIES 492B deals with the regions west of the Mississippi, i. e., the Great Plains, the Mountain States, the Southwest, the Northwest, and California.

Credit: 2 semester-hours each

INSTITUTES AND WORKSHOPS

SOCIAL STUDIES 490A. *United Nations Institute*

This course covers four and one-half hours per day for ten consecutive days excluding Sunday. It consists of basic lectures on factual backgrounds by the instructor, supplementary lectures by visiting lecturers from the United Nations and other organizations, discussions, workshop and library projects, demonstrations of the use of audio-visual materials, and field trips to the United Nations. Included among the subjects studied are the national state system, war and peace, world organizations (past, present, and proposed), the national armaments problem, international law, the international police proposal, pacific methods of settling international disputes, and the outlook for international co-operation.

Credit: 3 semester-hours

SOCIAL STUDIES 490B. *The United Nations and American Foreign Policy*

The purpose of this course is to help provide an understanding of the United Nations in its operation as a basis for American foreign policy. In that the Charter of the United Nations forms the backbone of American cultural, economic, and military cooperation with other nations, its interpretation and the application of our aid to needy people open a wide area of disagreement within the nation. Following the principle that American foreign policy should rest upon an intelligent understanding on the part of the electorate and working within the framework of the policy of the State Board of Education with regard to controversial issues, the United Nations Institute deals with the strong as well as the weak aspects of this newly created world organization. This institute serves the needs of teachers of all grades, students of foreign policy, the public at large, as well as visitors from other lands who are here to study the ways of American democracy. It is available to students who have completed the requirements for SOCIAL STUDIES 490A, *United Nations Institute*, or the equivalent.

Credit: 3 semester-hours

SOCIAL STUDIES 490C. *The Specialized Agencies of the United Nations*

The purpose of this course is to give the student an opportunity to learn about the various activities of the specialized agencies of the United Nations. The course deals with the positive activities of the United Nations in the various areas of human welfare. Visiting lecturers from the agencies themselves and from areas of the world receiving such help are a regular part of the class work. Trips to the New York offices of these agencies and individual research make up the balance of the work for this course.

SOCIAL STUDIES 490A, *United Nations Institute*, or its equivalent is a prerequisite for this course.

Credit: 3 semester-hours

SOCIAL STUDIES 490D. *The United States and World Affairs*

The purpose of this course is to give the student an opportunity to make a thorough survey of the leading problems in world affairs. Visiting lecturers from agencies concerned with the problems of today's world supplement the basic information supplied by the regular members of the Institute staff. Included among the subjects studied are: Underdeveloped areas of the world, technical assistance, international trade and cultural interdependence. Special emphasis is placed on the relations of the United States with such areas of the world as the Far East, Eastern Europe, the Middle East, Western Europe, and Latin America.

This course is designed primarily for teachers who feel the need for accurate background information and improved teaching materials and techniques for use in their classrooms. In addition to the conventional lectures, this course features the showing of the latest films in the field of world affairs, field trips to the United Nations and to foreign areas of New York, exhibits of teaching materials, demonstrations of teaching techniques and materials, folk singing, and folk dances suitable for classroom use.

Credit: 3 semester-hours

SOCIAL STUDIES 490E. *Latin America, A Survey*

The purpose of this course is to give the student an opportunity to make a thorough survey of Latin America. Visiting lecturers from agencies concerned with Latin American affairs supplement the basic information supplied by the regular members of the Institute staff. Included among the subjects studied are: Geographic setting and influences, pre-European cultures, exploration and settlement, independence, the Monroe Doctrine, economic colonialism, Pan-Americanism, present-day Latin America, United States relations with Latin America, and Latin America and the United Nations.

This course is designed primarily for teachers who feel the need for accurate background information and improved teaching materials and techniques for use in their classrooms. In addition to conventional lectures, this Institute features the showing of the latest films on Latin America, field trips to the United Nations and Latin American centers of New York, exhibits of materials suitable for teaching, demonstrations of teaching techniques and materials, folk singing, and folk dances suitable for classroom use.

Credit: 3 semester-hours

SOCIAL STUDIES 490F. *Russia in the Modern World*

The purpose of this course is to give the students an opportunity to study the development of modern Russia and the impact of its emergence as a world power. Particular attention is devoted to the role played by the geographical and historical forces that influenced Soviet foreign policy. The course meets three hours a day for each of fifteen days. Visiting lecturers from agencies concerned with Russian affairs supplement the basic information supplied by the regular members of the Institute staff. Included among the topics studied are: The nature and source of Soviet power, land and people of the Soviet Union, the role of the Communist Party, United States relations with Russia, Russia in the United Nations, Russian interest in the Far East and the Middle East, and the Cold War.

This course is designed primarily for teachers who feel the need for accurate background information and improved teaching materials and techniques for use in their classrooms. In addition to conventional lectures, this course features the showing of the latest films on the Soviet Union, field trips to New York City, exhibits of materials suitable for classroom use and demonstrations of teaching techniques.

Credit: 3 semester-hours

SOCIAL STUDIES 490G. *Western Europe at Mid-Century*

The free nations of Western Europe are examined for their influence upon world affairs as well as for the ways in which they are affected by developments on the international scene. They are studied as the point of East-West contact and as a center of East-West rivalry. Particular attention is paid to the changing status of Western European powers and to the geographical, economic, and historical forces which are bringing about this change. Included among the areas studied are: political and governmental institutions; geographic influences; intra-European cooperation; economic bases of politics and history; pertinent historical trends and developments; social and intellectual developments; and the role of tradition and provincialism. Among the nations considered are: the United Kingdom, France, the Benelux countries, West Germany, the Scandinavian countries, Italy, Portugal, Spain, and Ireland.

This course is designed primarily for teachers who feel the need for up-to-date background information and improved teaching materials and techniques for use in their classes. All teachers interested in world affairs are given the opportunity to build up a personal background of information and understanding. Background lectures, small study groups, field trips to New York City, films and exhibits of materials suitable for classroom use are included in the program. Spokesmen for the various national points of view supplement the basic information presented by the regular members of the Institute staff.

Credit: 3 semester-hours

SOCIAL STUDIES 491A. *Workshop in Citizenship Education, Part I*

The purpose of this workshop is to present a study of what has been done in some of the many projects in citizenship education throughout the country. Special emphasis is placed on the plans and materials developed by the Citizenship Education Project now being conducted by Teachers College, Columbia University, and financed by the Carnegie Corporation. Montclair was one of the eight teachers colleges cooperating in this project, and the College High School is a cooperating school. Consultants are invited in as needed. Attention is given to programs and practices already in use

in the schools, and advantage is taken of the state-wide project in collecting from the schools experiences in education for character and citizenship. New means for citizenship education are sought, and methods of evaluation are reviewed. Experience in the group processes essential to democratic action is provided. It is hoped especially to include in the workshop those who have been or may be serving as training teachers for Montclair student teachers, especially in the fields of social studies and English. Principals and administrators who want to join with others in learning how to make more effective the citizenship education in the schools with which they are connected are invited to participate. Each participant in the workshop works on actual plans for carrying out such education in the school and the classroom.

Credit: 2 semester-hours

SOCIAL STUDIES 491B. *Workshop in Citizenship Education, Part II*

Membership in this workshop course is limited to those who have completed SOCIAL STUDIES 491A, and participants in this advanced workshop meet and work with the members of the SOCIAL STUDIES 491A workshop. On the basis of previous experience, each member of the SOCIAL STUDIES 491B group is expected to work out several laboratory practices or similar projects for use in the classroom or the school.

Credit: 2 semester-hours

SOCIAL STUDIES 499. *Introduction to Chinese Culture*

A number of authorities introduce first-year students to the rise, growth, and maturing of Chinese civilization, as well as to the fundamental problems of China today, including the conflict of ideologies. The course is given in twelve days. Each day there are two hours of lectures in the morning; after lunch a period of forty-five minutes is devoted to informal talks including further discussion on Chinese music, philosophy, Chinese school days, festivals, and calligraphy. Some time is also given to the singing of Chinese songs and the showing of motion pictures. During the two-hour workshop period the students prepare their projects, teaching units, and background material under the direction of faculty members.

Credit: 3 semester-hours

SOCIAL STUDIES 496A. *The Chinese Society*

This course is an intensive study of the formation of the Chinese people, their collective life, and the interaction of natural and human forces with the resultant social organizations from early times to the present. Particular emphasis is placed upon the development of social institutions, including the family, labor guilds, educational systems, and religious institutions, as well as their transformation and mod-

ernization under the impact of different forces from the West. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*

Credit: 3 semester-hours

SOCIAL STUDIES 496B. *China: The Evolution of a Nation*

This course is an intensive study of the Chinese civilization, the forces underlying the development of the national character of the Chinese people, their contacts and conflicts with other peoples and cultures from historical times to the present. Because of its voluminous material, this course does not attempt to cover the whole span of Chinese history, but it is an integrated presentation of the maturing of the Chinese people as a nation. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*

Credit: 3 semester-hours

SOCIAL STUDIES 497. *Chinese Philosophy*

This course shows how the ancient philosophies, Confucianism, Taoism, Buddhism, Mohism, can be applied to the China of today and how they affect modern Chinese thought. There are twenty-four hours of lectures in the morning, and round-table discussion and library work in the afternoon.

Prerequisite: SOCIAL STUDIES 499, *Introduction to Chinese Culture*, or an equivalent course in philosophy

Credit: 3 semester-hours

SOCIAL STUDIES 498. *China and the Far East*

This course presents to the student a factual and up-to-date analysis of the forces that are operating in the Far East and shows how these forces may affect future developments in this critical area of the world. China, with its people as a key area in the Far East, is interpreted in terms of current economic, political, and cultural developments. Recognized experts from the various countries in the Far East present problems from the standpoint of their experience and background. The course itself is synthesized by a course director who is a serious student of China and its neighbors.

Credit: 3 semester-hours

FINE ARTS 414. *History of Chinese Art*

For a description of this course, see page 141.

Credit: 3 semester-hours

ENGLISH 459. *A Survey of Great Chinese Literature*

For a description of this course, see page 63.

Credit: 3 semester-hours

THE DEPARTMENT OF SPEECH

Speech education in the schools of New Jersey has received increasing recognition in recent years with the realization that effective oral communication is important to the achievement of self-realization, vocational competency, social effectiveness, and good citizenship. Additional programs of speech are being established to provide developmental and corrective work according to each student's needs. The effectiveness of these programs depends upon the sound and extensive preparation of master teachers who can organize and supervise speech programs and who can offer dynamic leadership in helping to integrate the speech program in the overall school curriculum.

The graduate program in speech allows qualified students to specialize in one of two areas of speech education: speech and dramatics, or speech and hearing rehabilitation.

It is expected that each graduate student will have at least one of the following goals for his work:

1. To be the director or supervisor of a speech education program in the elementary and secondary schools of a community.
2. To be further qualified as a speech therapist in schools and special institutions.
3. To increase his skill as a teacher of speech and dramatics in secondary schools.
4. To provide opportunities for the completion of requirements for certification in the state and in the national professional organization, the American Speech and Hearing Association.

In order to matriculate as a candidate for the Master of Arts degree in Speech, the applicant must have completed a minimum of eighteen semester-hours of course work, or the equivalent, from among the following areas:

Voice production; fundamentals of speech

Phonetics

Speech correction; speech pathology

Anatomy and physiology of the vocal and auditory mechanisms

Speech laboratory practice; clinical practicum in speech

Oral interpretation; choral speaking

Public speaking; group discussion

Each student must also be capable of setting a good example of acceptable speech. Each candidate will be interviewed by a speech faculty committee; and if any speech deficiencies are noted, the candidate must correct them prior to matriculation, or accept matriculation on the condition that such correction will be made one year before the granting of the degree.

REQUIREMENTS FOR THE A.M. DEGREE IN SPEECH

Upon admission to the graduate program in speech, the student must declare his area of specialization: (1) speech and dramatics, or (2) speech and hearing rehabilitation. Each student must spend at least one summer in full-time study in the seminar course in his area of specialization.

I. Professional Education Requirements S. H.

Education 503. <i>Methods and Instruments of Research</i>	2
Other education courses—to be chosen by the student in consultation with his adviser.	4
Total	6

II. Required of All Speech Majors

Speech 550. <i>Advanced Study of Voice and Speech Production</i>	3
Speech 592. <i>Areas and Techniques of Research in Speech and Dramatics</i> (3)	
or	3
Speech 593. <i>Areas and Techniques of Research in Speech and Hearing Rehabilitation</i> (3)	

III. Areas of Specialization

A. For Students Specializing in Speech and Dramatics

Speech 567. <i>Seminar in Dramatic Production</i>	6
Speech 449. <i>Advanced Public Speaking</i> —2 s. hrs.	
or	2 or 3
Speech 462. <i>Group Discussion and Leadership</i> —3 s. hrs.	
Speech 565. <i>Advanced Oral Interpretation</i>	2
One course in speech and hearing rehabilitation	2 or 3
Electives (Chosen by the student in consultation with his adviser.)	6 to 8
Total	20

or

B. For Students Specializing in Speech and Hearing Rehabilitation

Speech 535. <i>Seminar in Speech and Language Rehabilitation</i>	6
One course in audiology	2 or 3
Speech 411. <i>Advanced Speech Pathology</i> —3 s. hrs.	
or	3
Speech 412. <i>Speech Diagnosis</i> —3 s. hrs.	
One course in speech arts	2 or 3
Electives (Chosen by the student in consultation with his adviser.)	5 to 7
Total	20

Grand Total	32
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IV. *Additional Requirements*

- A. Written comprehensive examination
- B. Oral comprehensive examination
- C. Oral demonstration of communication skill—The speech faculty will arrange a committee to observe each candidate as he participates in a professional activity or program of thirty minutes in length. The nature, time, and place of the activity will be of the student's choosing, prior to his final semester. It may be in the form of a speech at a Parent-Teacher Association meeting or at a professional convention, a reading, a dramatization, or any combination which demonstrates the candidate's ability to exemplify good speech, and to be effective before an audience.

GRADUATE COURSES

SPEECH 522. *Advanced Phonetics*

This course is designed for the advanced student who has a basic background in the science of speech sounds. Further ear training is emphasized in order to develop skill in recognizing and distinguishing acceptable English speech sounds, deviant speech sounds, regional variations in standards of American English, and sounds in foreign languages. Extensive practice is provided in the use of International Phonetic Alphabet sound symbols and modifiers. Additional study is devoted to the stress, phrasing, and intonation patterns used in speaking English, with some analysis made of these elements in other languages.

Credit: 2 semester-hours

SPEECH 531. *Advanced Audiology*

The purpose of this course is further to develop skills in administering tests for determining pure-frequency and speech reception thresholds. Emphasis is placed on evaluation and interpretation of test results and on the analysis of client histories. Principles and techniques of hearing and evaluation, measurement of recruitment, and tests for psychogenic deafness and malingering are studied. Consideration is also given to pre and post-surgical audiometry, and to the special problems of testing children. Demonstration and supervised practice sessions in pure-frequency and speech audiometry, and in EDR (Electrodermal Response) testing are provided.

Credit: 3 semester-hours

SPEECH 532. *Practicum in Speech Rehabilitation*

This course provides advanced students with the opportunities for the practical application of diagnostic and rehabilitative techniques with high-school students and adults who have major speech and language problems. Qualified students participate in specialized laboratory experiences which include planning and supervising speech therapy sessions providing rehabilitative services to individuals and small groups, interviewing applicants, and administering audiometric tests.

Credit: 2 semester-hours

SPEECH 533. *Supervising Speech Correction Programs*

This course is designed for the advanced student in speech correction who is interested in preparing for a position as supervisor or director of the speech-improvement program in a school or special center. Methods of organization and administration of the program are discussed. Emphasis is placed upon problems of screening, referral, speech-staff training and orientation, in service courses, parent and community relations, integration with other disciplines, and development of new materials for testing, teaching, and evaluating.

Credit: 2 semester-hours

SPEECH 534. *Advanced Anatomy and Physiology of the Vocal and Auditory Mechanisms*

This course is for advanced students in the speech sciences. The basic anatomy of the mechanisms of speech reception and expression is reviewed. Consideration is also given to the integrated functioning of the central nervous system, the automatic nervous system, and the endocrine system. The effects of abnormalities of structure and function of the speech and hearing processes are emphasized. Discussion includes the medical and surgical aspects of rehabilitation, and the hygiene of the ear, nose, and throat. Demonstrations and supervised laboratory dissections are included.

Credit: 3 semester-hours

SPEECH 535. *Seminar in Speech and Language Rehabilitation*

Graduate speech majors specializing in the speech sciences are required to devote one summer session to the study of speech and language disorders and to participate in the therapy program of the Speech and Hearing Center. The course meets for four hours a day, with the time equally divided between class discussion and practicum in speech rehabilitation. Emphasis is placed upon the diagnostic, therapeutic, and evaluative techniques employed in working with children and adults who have speech disorders of organic etiology. A minimum of 100 clock hours of supervised teaching must be accumulated.

Credit: 6 semester-hours

SPEECH 550. *Advanced Study of Voice and Speech Production*

The study is made in this course of materials and methods used in the teaching of speech fundamentals on the junior-high and senior high-school levels. Review and further application of basic subject matter, including English and comparative phonetics, are included. Opportunities are provided for practice in improving or further developing personal voice and speech skills, in directing the practice of students with minor speech difficulties, and in phonetically transcribing speech from phonograph records or tape recordings. Some consideration is given to methods of helping students, for whom English is not a native language, to improve their voice and speech.

Credit: 3 semester-hours

SPEECH 563. *Scenery Design and Construction*

This course is designed to extend the advanced-speech student's knowledge in scenery design and construction techniques. Special emphasis is placed upon stage design as related to the play, the director, and the audience. The course of study includes a survey of the styles of design and the use of the perspective sketch and stage model in planning the stage setting. The application of stage construction techniques is used to demonstrate the necessity of scene design in planning the stage production. Each student is expected to design and plan the construction of scenery for a play appropriate for production in a secondary school.

Credit: 3 semester-hours

SPEECH 564. *History of the Theater*

This course is designed to give the advanced speech student a comprehensive view of the development of the theater from the Classic Greek drama through the Nineteenth Century. Special attention is placed upon plays and playwrights of the period, theater architecture, scenery, costuming, and styles of acting and presentation of each period. Course work includes oral reports, lectures, and classroom demonstrations. Advanced students may enroll with the consent of the instructor.

Credit: 2 semester-hours

SPEECH 565. *Advanced Oral Interpretation*

This course is designed to provide further study of techniques of reading aloud of poetry and prose. Extensive practice is provided in the analysis and presentation of various types of literary material (short story, ballad, narrative, sonnet, etc.) suitable for use in the classroom and for special programs.

Credit: 2 semester-hours

SPEECH 566. *Costume and Make-up for the Stage*

This course provides the advanced student with opportunities to design costumes and make-up for plays of various periods. Consideration is given to the use of materials, colors, and textures in achieving desired effects on the stage. Laboratory work in stage make-up is provided to develop skill in creating suitable visual characterizations.

Credit: 3 semester-hours

SPEECH 567. *Seminar in Dramatic Production*

This seminar is for advanced play-production students. It allows each member of the class to pursue projects in keeping with his own needs or interests in either the technical or directorial aspects of play production. When possible, supervisory assignments are made in connection with the current program of plays. The seminar meets four hours daily for individual project or laboratory activities, for evaluation of specific teaching problems in connection with the current plays, and for group analysis of typical production problems. Enrollment is open to matriculated graduate students in speech, or by permission of the instructor.

Credit: 6 semester-hours

SPEECH 590. *Problems in the Teaching of Speech*

This course is designed to present an analysis and investigation of the problems encountered in the speech classroom, and to survey the textbooks and teaching aids available to the teacher of speech on various grade levels. Consideration is also given to the problems of (1) motivation, (2) methodology, (3) evaluation procedures, and (4) co-curricular speech activities.

Credit: 3 semester-hours

SPEECH 591. *Organization and Administration of the School Speech Program*

This course is designed for the advanced student of speech education who is interested in the problems of organizing and administering a comprehensive speech program in a school system. Consideration is given to curriculum development, teacher-administration relationships, class scheduling, reports and records, in-service training, and integration of the speech program in the total school curriculum.

Credit: 2 semester-hours

SPEECH 592. *Areas and Techniques of Research in Speech and Dramatics*

This course is required of graduate speech majors who are specializing in speech and dramatics. Methods of research appropriate for studies in speech and dramatics are analyzed. Significant problems in the field are investigated and discussed, and published research projects are evaluated. Special attention is given to the problems of locating and utilizing professional journals and other publications for research in speech and dramatics. Each student is required to prepare an outline for a research project and to develop a bibliography for the study.

Credit: 3 semester-hours

SPEECH 593. *Areas and Techniques of Research in Speech and Hearing Rehabilitation*

This course is required of graduate speech majors who are specializing in the speech sciences. Methods of research appropriate for studies in speech and hearing are analyzed. Significant problems in the field are investigated and discussed, and published research projects are evaluated. Special attention is given to the problems of locating and utilizing professional journals and other publications for research in speech and hearing. Each student is required to prepare an outline for a research project and to develop a bibliography for the study.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

SPEECH 410. *Speech Pathology*

This course presents a study of the etiology and pathology of major language and speech disorders which may result from organic, functional, or emotional disturbances including severe stuttering, dysphonia, laryngectomy, cleft-palate, cerebral palsy, and aphasia. Emphasis is placed upon methods of diagnosis, evaluation, and rehabilitation.

Credit: 3 semester-hours

SPEECH 411. *Advanced Speech Pathology*

The purpose of the course is to encourage further study and evaluation of modern techniques of speech rehabilitation, and to review research findings in the areas of voice, articulation, rhythm, and symbolization disorders. Consideration is given to the ways in which speech rehabilitation may be integrated with related health services and educational services in schools and special centers. In

addition to two hours of class lecture and discussion, students are expected to spend two hours a week, for twelve weeks, on a rotating internship basis at: (a) a cerebral palsy center, (b) a training class for the mentally retarded, (c) a rehabilitation center or Veterans Administration Hospital, and (d) a hospital speech therapy department. Special arrangements are made when offered in the summer session.

Prerequisite: SPEECH 410 or equivalent

Credit: 3 semester-hours

SPEECH 412. *Speech Diagnosis*

The purpose of this course is further to analyze and evaluate popularly employed techniques of speech diagnosis and therapy. Commercially available diagnostic tools, as well as tests that may be designed by the therapist to meet specific needs are discussed. Consideration is also given to the dynamics of interviewing and to the reporting and interpreting of client histories. Specific methodology to be used in providing speech rehabilitation services to children and adults with speech and language disorders is evolved. Attention is given to the application of speech arts activities, principles of learning, and principles of mental hygiene in the speech-therapy session.

Credit: 3 semester-hours

SPEECH 435. *Stagecraft*

This workshop course provides training in constructing and painting of scenery and lighting the stage. A minimum of twelve clock hours in the scene shop is required.

Credit: 2 semester-hours

SPEECH 436. *Fundamentals of Stage Lighting*

The purpose of this course is to analyze the functions of light on a stage and to study and use the instruments available to achieve desired effects. Optimum and minimum equipment are studied. The laboratory work is done in the Memorial Auditorium at the College, which houses modern and flexible stage-lighting equipment, and in a small auditorium with limited facilities. Students are encouraged to apply the principles of stage lighting to the specific auditoriums in which they may work. Appropriateness of lighting for different types of stage activities is a fundamental consideration in the course.

Prerequisite: SPEECH 105A or SPEECH 435 or permission of the instructor

Credit: 3 semester-hours

SPEECH 437. *Dramatic Production Workshop*

This course is designed for those students desiring a comprehensive introduction course in theater production. Students participate as junior members of the summer-theater company. They place special emphasis upon stagecraft and lighting, or acting. In addition, they participate in the costuming, make-up, and house-management activities. Classes meet three hours daily, in addition to laboratory assignments in connection with the summer-theater program. The course may be used as partial fulfillment of the requirements of the undergraduate speech major or minor, or as a prerequisite to matriculation for the Master's degree in speech.

Credit: 4 semester-hours

SPEECH 448. *Choral Speaking*

As members of a speaking choir, students acquire skill in interpreting various forms of literature suitable for group treatment. Consideration is given to their use in the various grade levels in teaching. Students prepare a group of selections suitable for their particular interest and purpose.

Credit: 2 semester-hours

SPEECH 449. *Advanced Public Speaking*

This is an advanced course in the theory and practice of public speaking. It provides opportunity for training in the more complex speech skills, especially in the techniques of leadership in speech situations.

Prerequisite: SPEECH 204 or the equivalent

Credit: 2 semester-hours

SPEECH 456. *Play Direction*

This course covers the choosing and casting, as well as directing, of plays. Scenes are directed for class criticism, and a detailed prompt-book of one play is prepared. Whenever possible, this play is given publicly before a student audience. This course complements SPEECH 435.

Credit: 2 semester-hours

SPEECH 457. *Directing the Assembly Program*

It is the purpose of this course to prepare students to organize and to conduct assembly programs and similar activities. Class lectures and discussions cover all phases of the director's responsibilities. Groups conduct research on suitable program materials and share their findings. Each student prepares a detailed script for one assembly or commencement program.

Credit: 2 semester-hours

SPEECH 461A. *Applied Speech Correction*

Remedial speech laboratories are maintained at the College as a community service so that students may apply their knowledge of diagnostic, remedial, and evaluative techniques in a professional laboratory experience. Students assist staff members in demonstrations, prepare lesson plans for individual and group speech therapy, and teach under supervision.

Credit: 2 semester-hours

SPEECH 461B. *Applied Speech Correction: Advanced*

Additional opportunities for practical experience with children and high-school students who have speech problems are provided in this course. Provisions are made for qualified students to participate in specialized laboratory experiences which include audiometric testing, planning and supervising speech therapy for small groups of children, demonstrating model lessons for beginning students, and interviewing applicants for admission to the laboratory.

Credit: 2 semester-hours

SPEECH 461C. *Advanced Practicum in Speech and Hearing*

This course provides students with further opportunities to apply techniques of speech and hearing rehabilitation under supervision in a laboratory setting. Students are required to: (1) administer audiometric tests and speech diagnostic examinations; (2) work with the parents of children who have speech disorders; and (3) assist the beginning student-speech therapist in planning and carrying out therapy sessions.

Prerequisite: Speech 461A and B

Credit: 2 semester-hours

SPEECH 462. *Group Discussion and Leadership*

Students are taught the principles of democratic discussion and methods for guiding the informal group conference, panel symposium, lecture, and debate forums. Frequent opportunities to apply these principles and methods are given through discussion of topics chosen by the class.

Credit: 3 semester-hours

SPEECH 463. *Audio-Visual Aids in Teaching Speech*

The aim of this course is to equip prospective teachers to understand the desirable characteristics; capabilities; and all possible uses of charts, models, projection equipment, and magnetic and disc recorders available for the teaching of speech. The distribution, cost, operation, servicing, and storing of instruments and of supplies are also considered.

Credit: 2 semester-hours

SPEECH 464. *Psychology of Oral Communication*

This course is divided into three major units: (1) speech and personal adjustment, (2) the psychology of children who have problems in oral communication in addition to their physical and/or emotional handicaps, and (3) programs and problems in the education and rehabilitation of handicapped children who have speech and/or hearing disorders. Consideration is given to ways in which psychologies of learning, psychoanalysis, and general semantics have influenced the areas of speech pathology and speech therapy.

Credit: 2 semester-hours

SPEECH 468. *Measurement of Hearing*

A comprehensive study of the measurement of hearing is made in this course with attention being given to the educational implications of impaired audition and deafness. A review of the physics of sound and the anatomy and physiology of the auditory mechanism are considered as well as hearing tests, principles and techniques of screening tests, interpretation of test results, types and uses of hearing aids, and educational procedures for the habilitation of the hard-of-hearing or deaf child. Demonstrations and supervised practice in administering pure-tone audiometer tests are provided.

Credit: 3 semester-hours

SPEECH 469. *Auditory Rehabilitation*

The purpose of the course is to study the current theories and practices of teaching speech reading and auditory comprehension to hard-of-hearing children and adults. The educational problems of helping the student to gain proficiency in speech reading as a receptive language process are discussed. In addition, principles of auditory training are studied as means to help develop the use of residual hearing. Emphasis is placed on the ways in which speech reading and auditory comprehension supplement each other in the rehabilitation of the hard-of-hearing individual. Practical consideration is given to the preparation of lessons for the acoustically impaired at all grade levels.

Credit: 2 semester-hours

SERVICE COURSES FOR NON-SPEECH MAJORS

The following courses may not be taken by speech majors. Students in other departments of the College may take them for graduate credit under certain conditions. Such students are advised to check with their advisers regarding enrolling in these courses.

SPEECH 454. *Training the Speaking Voice*

This is a course in the study of the problems of speech, the development of a pleasant speaking voice with precision in diction, and the application of speech skills to practical speaking situations.

Credit: 2 semester-hours

SPEECH 466. *Speech Development: Improvement and Re-education*

This course is intended for superintendents, principals, and classroom teachers who have little or no background in speech education. Consideration is given to the following topics: (1) speech development; (2) speech difficulties or problems found on the kindergarten, elementary, and secondary-school levels; (3) acquisition of good voice and speech characteristics; (4) use of techniques and materials in classrooms to motivate good speech patterns; and (5) ways of setting up and integrating speech education in school systems. Demonstrations with individuals and groups are made, and students are expected to prepare a practical project.

Credit: 2 semester-hours

SPEECH 467. *Oral Interpretation for the Teacher*

This course is organized as a laboratory to help the teacher develop his potentialities in oral reading. Each student is given many opportunities to read aloud and to participate in informal critiques. Assistance is given in compiling a repertory of selections most useful in daily teaching.

Credit: 2 semester-hours

OTHER COURSES THAT MAY BE USED AS ELECTIVES

For more complete descriptions see the undergraduate catalog.

FINE ARTS 400. *Philosophy of Art*

This course is designed to give the student a knowledge of the various theories of art and the nature of the art experience. Readings include the works of major philosophic writers, artists, and psychologists. Through discussion each student is encouraged to develop a personal philosophy of art education.

Credit: 2 semester-hours

FINE ARTS 401. *Art Curriculum of Elementary and Secondary Schools*

This course is planned to give the student an opportunity to organize his learnings into a tentative curriculum of art and to test his thinking in relation to the best curriculum guides in current use.

Credit: 2 semester-hours

FINE ARTS 403A & 403B. *Print Making, I and II*

The many ways of making prints: etching, dry point, wood cuts, and wood engraving, lithography, silk screen, photograms, and photography are learned in personal production which emphasizes the relation of material, tool, and process. Adaptation of these professional media to classroom use is one aspect of this course. The work of masters in these various types of print making are studied in reproductions and in museum trips.

Credit: 2 semester-hours each

FINE ARTS 406. *Art Workshop*

The workshop is designed to allow the student to have a concentrated experience in an art form of his choice. Each student projects his own problem in consultation with, and under the direction of, a faculty member. In addition the student is expected to set up an exhibit of the work he has accomplished during his four years.

Credit: 4 semester-hours

FINE ARTS 408. *Creative Painting*

This course gives the student an opportunity to use the materials of the painter for personal creative experience. Through the use of oils, water colors, and other media, the student is encouraged to work on landscape, figure, and free imaginative composition. Emphasis is placed on individuality of expression, variety of subject matter, and experimentation. No previous art experience is necessary.

Credit: 2 semester-hours

FINE ARTS 414. *History of Chinese Art*

In this course the developments and distinguishing characteristics of the major arts of China are traced by specialists and are surveyed from the point of view of their historical developments. An historical survey of the development of Chinese art from the dawn of civilization to the present day is made which includes the role played by foreign influences such as the spreading of Buddhism and the Chinese influence on other parts of the world. There are twenty-four hours of lectures in the morning and round-table discussion and library work in the afternoon. During the afternoon workshop period the technique of Chinese painting is demonstrated. Although there is no prerequisite for this course, it is suggested that those who enroll should have some knowledge of art or have taken SOCIAL STUDIES 499, *Introduction to Chinese Culture*.

Credit: 3 semester-hours

FINE ARTS 415. *Designing in Native Materials*

In this course the student gains an appreciation and understanding of art expression growing out of the immediate environment as he works creatively with native materials. A new respect for the potentials of raw earth products is discovered through art experiences in keeping with good conservation practices. Flower and plant arrangement for room and table decorations are studied. Digging for clay, hunting for wood, seeds, grasses, and experimenting with dyes become an exciting adventure.

Credit: 2 semester-hours

FINE ARTS 416. *Appreciation of Chinese Art*

This is an introductory course on Chinese art in its various aspects: its historical development; aesthetic principles; and various forms such as calligraphy, painting, sculpture, bronze and jade, pottery and porcelain, architecture, etc. Topics include the philosophical basis of Chinese art, nature in Chinese art, and symbolism in Chinese art. Each lecture is illustrated by photographs and lantern slides as well as demonstrations. Students have an opportunity to learn the elements of Chinese painting from widely recognized Chinese artists.

Credit: 3 semester-hours

FINE ARTS 420. *Sculpture I: General*

This course provides the student with studio experiences in three dimensional expression. A variety of materials are explored including clay, plaster, metal, plastics, stone, and wood. Sculptural methods such as modeling, direct carving, construction, and casting are experienced. Special emphasis is placed on those materials and methods

most applicable to the public school teaching program. In addition to the studio problems the student is required to complete text assignments and outside reading problems, make frequent museum and gallery visits, prepare written and oral reports on readings and visits, and spend additional time in designing.

Credit: 2 semester-hours

FINE ARTS 425. *Metalswork I: General*

This course introduces the student to the metals traditionally used in the shaping of useful articles and to the influence of both materials and construction on methods of design. It treats the relationships of structural and surface design as well as the techniques for developing both. It explores the role of the designer-craftsman in a technological society, the relationships of hand and machine arts, and the influence of the handicrafts on the development of taste. Research in these areas includes trips, reading, and discussion.

Credit: 2 semester-hours

FINE ARTS 430. *Drafting and Woodwork*

This course is designed as an introduction to the basic processes in designing in wood with the use of hand and power tools. Drafting the designed pieces is integrated with the total designing process and includes the use of drawing instruments and the making of working drawings.

Credit: 2 semester-hours

FINE ARTS 435. *Costume Design*

A study of the elements of art as they determine the designing of the costume is the content of this course. Draping and construction in materials are the design approaches used to show the necessity of designing the costume in terms of the individual.

Credit: 2 semester-hours

FINE ARTS 440. *Home Design and Community Planning*

The design of the home and the community for the full utilization of the knowledge and the resources of industry, engineering, science, and art is the content of this course. Work of leading architects and city planners is explored as it fits into the solution of the problems of interest to the student and as a reflection of our contemporary cultural patterns. Trips to sources for home furnishing, model homes, well-planned communities are included in the course activities.

Credit: 2 semester-hours

FINE ARTS 445. *Life Drawing*

This course in the study of the structure and proportions of the human form with emphasis on expressiveness of drawing.

Credit: 2 semester-hours

FINE ARTS 450. *Print Making I—Silk Screen Printing*

This course affords an opportunity to study and practice the graphic art techniques of silk screen from the creation of the master designs through the construction of necessary printing facilities and printing. Experiences include the use of tusche, glue, stencil lacquer, and photographic techniques.

Credit: 2 semester-hours

FINE ARTS 460. *Photography: A Contemporary Art Form*

The content of the course is predominantly creative, using the technical materials as a medium of expression and experimentation. The work of leading contemporary artists using photography as an art medium is studied.

Credit: 2 semester-hours

FINE ARTS 474A and B. *Arts and Crafts in Education, I and II*

Included in this course are workshop activities in the arts and crafts of the elementary and secondary school program. Painting, drawing, modeling, pottery, weaving, papier-mache, paper sculpture, school display techniques, lettering, wood, leather, plastics, metal work, and puppetry are materials and processes which are explored.

Credit: 2 semester-hours each

FINE ARTS 500. *Contemporary Art*

This course presents a survey of the major influences and trends in the development of painting, sculpture, and architecture of this century. The use of visual materials such as slides, art films, and reproductions supplement discussion and studio participation. This course is planned for students who wish to enlarge their general education in art and requires no technical competency.

Credit: 3 semester-hours

GEOGRAPHY 503. *Economic Geography of the United States and Canada*

A study is made of the agricultural, industrial, and commercial development of the United States and of the geographic factors that have contributed to that development.

Credit: 2 semester-hours

GEOGRAPHY 504. *Economic Geography of Europe*

This course constitutes a study of the economic development of the nations of Europe in relation to the environmental background and resources that have made Europe one of the world's leading continents.

Credit: 2 semester-hours

GEOGRAPHY 509. *Economic Geography of Asia*

This course constitutes a treatment of the economic and commercial development of the countries of Asia in relation to their natural environment.

Credit: 2 semester-hours

GEOGRAPHY 405. *Urban Geography*

The student is introduced to the complex forces that have been and are responsible for the intense concentration of political, social, and economic activities within a small area. This area is then analyzed from the point of view of its evolution, morphology, and function. The changing characteristics of our cities, suburbanization, city-service areas, and city-hinterland interrelationships are also investigated. Special emphasis is placed upon research methods and source materials.

Credit: 3 semester-hours

GEOGRAPHY 406. *Geology*

This course deals with the earth and its geographic, stratigraphic, and structural development throughout geologic time; the record of the evolution of life as interpreted through a study of rocks and fossils.

Credit: 2 semester-hours

GEOGRAPHY 408A and 408B. *Political Geography*

This course deals with the geographic conditions influencing the significant changes in the political divisions of the world. Emphasis is placed on geographic factors influencing racial, religious, commercial, and political adjustments between nations.

Credit: 2 semester-hours each

GEOGRAPHY 409. *Economic Geography of the British Isles*

A comprehensive treatment of the resources of the British Isles is given, and the influence of the natural environment upon the utilization of those resources in the economic, social, and political development of the British Empire is evaluated.

Credit: 2 semester-hours

GEOGRAPHY 410. *Economic Geography of Caribbean America*

This is a study and interpretation of the major and important minor economic areas of Caribbean America in relation to the natural environment. Attention is also given to the historical factors which have played a part in the economic and social life of the people.

Credit: 2 semester-hours

GEOGRAPHY 411. *Historical Geography of the United States*

This course provides an opportunity for students of history, geography, and related disciplines to become familiar with the major principles of historical geography. It emphasizes the geographic factors pertinent to an understanding of American history. Time-place relationships ranging from pre-Columbian America to the present are surveyed and analyzed critically. Particular attention is paid to source materials, to the cartography of specific times, and to geographical lore and thought.

Credit: 3 semester-hours

GEOGRAPHY 412. *Geography of Africa*

This course includes a topical and regional study of Africa. Special emphasis is placed upon the problems of economic adjustment in the tropics. Soils, vegetation, climate, physiography, natural resources, and other aspects of the physical environment are examined critically in the light of man's habitation of the continent. Relations between Africa and the rest of the world are analyzed.

Credit: 3 semester-hours

GEOGRAPHY 413. *Economic Geography of South America*

This course constitutes a study of the influence of the natural environment upon production and utilization of resources in the economic, social, and political development of the various nations of South America.

Credit: 2 semester-hours

GEOGRAPHY 414A and 414B. *Advanced Economic Geography*

This course is a study of the influence of the physical environment upon the production of, the trade in, and the utilization of the important agricultural, forest, mineral and sea products, and the manufactured commodities of the world.

Credit: 2 semester-hours each

GEOGRAPHY 416. *Conservation of Natural Resources*

This course provide an opportunity for students of the social and physical sciences to study the natural resources of the United States. Exploitation and conservation are both stressed. Our major resources are reviewed in terms of use, needs, and future developments. Consideration is given to the growth of legal and social awareness of the need for conservation practices in America.

Credit: 3 semester-hours

GEOGRAPHY 418. *Regional Geography of North America*

This course constitutes a detailed regional treatment of the continent of North America. Emphasis is placed upon the human activities of the various regions in relation to their natural environment and the relations of the regions to each other. Attention is given to the techniques of presenting the material and the use of geographic tools in the treatment of the subject-matter.

Credit: 2 semester-hours

GEOGRAPHY 419. *Geography of the Soviet Union*

This course is designed as a regional analysis of the Soviet Union. It examines critically the physical and human aspects of Soviet geography. Particular emphasis is placed on economic regions. Relations between the European states and the Soviet Union are discussed, and Russia's place in the world economy is analyzed.

Credit: 3 semester-hours

GEOGRAPHY 420. *Field Geography and Conservation*

This course constitutes a study of the relation between relief features of northern New Jersey, the location of natural resources, and the way in which land use and population distribution follow these patterns. Emphasis is given to the reading and interpretation of topographical maps and aerial photographs and to a study of the United States Geological and Soil Surveys of this region. By means of an actual land-use survey the student comes to appreciate the problems of conservation as they grow out of man's use of natural resources.

Credit: 2 semester-hours

GEOGRAPHY 421. *Population Problems of the World*

An intensive examination of the factors which influence the present-day distributional pattern of the world's people and the political, economic, and social consequences of this development are considered. Particular attention is placed on man-land relationships as related to population problems of contemporary nations.

Credit: 3 semester-hours

GEOGRAPHY 422. *Geography of the American Indian*

This course is designed to survey the culture of the American Indian (from the Ice Age to the Reservation) in relation to his geographic environment. It affords an insight into the geography and cultural history of North America prior to the coming of the white man, deals with the problems experienced and created by alien cultures when they meet for the first time, and culminates with discussion of the Indian problems of the present day. It serves to introduce the student to methods employed in interdisciplinary attacks upon cultural problems. The views of the geologist, archaeologist, cultural anthropologist, cultural historian, as well as the geographer are critically examined.

Credit: 3 semester-hours

GEOGRAPHY 423. *The Geography of Transportation*

An intensive examination of the principles of transportation geography is provided. The different methods of transportation are studied systematically with regard to their development and present-day role in regional development. The growth of international specialization and the resulting economic development are also considered.

Credit: 3 semester-hours

GEOGRAPHY 424. *Geography of New Jersey*

This course is a detailed topical and regional study of New Jersey. Physiography, climate, soils, flora, fauna, agriculture, industry, trade, population, and relations with neighboring states are intensively studied. On the basis of the data thus examined an attempt is made to delineate the geographic regions of the state. Emphasis is placed throughout on the relationship between New Jersey's people and New Jersey's earth.

Credit: 3 semester-hours

GEOGRAPHY 425. *Geography of Exploration and Settlement*

This course is designed to survey the great age of exploration and settlement (1500-1900) of lands overseas inaugurated by the Columbian voyages. Its major themes are: knowledge concerning the lands of the earth, the unfolding of the world map, the type settlements erected by Europeans in distant lands. Special attention is given to motives for exploration, methods of navigation and travel, routes explored, and the cultural features marking European settlement.

Credit: 3 semester-hours

MUSIC 405. *Orchestra Conducting and Score Reading*

This course aims to develop skills in orchestra conducting and score reading. It includes a study of the particular type of ear training needed in conducting, the technique of the baton, score reading, and interpretation. A special feature of this course is the presentation of a large amount of musical examples taken from standard repertory which contain practically all technical and psychological problems which face the conductor. Practical experience in conducting is given in the College High School Orchestra and the College Orchestra.

Prerequisite: MUSIC 305

Credit: 2 semester-hours

MUSIC 406. *Epochs in Musical Development, Part III*

This course is a continuation of MUSIC 208 and makes a study of the late romantic period and the rise of modern music. It includes a study of the music of Richard Strauss, Bruckner, Prokofieff, Mahler, Debussy, Tschaikowsky, Mussorgsky, Stravinsky, Sibelius, Schoenberg, Bartok, and Hindemith.

This course is professionalized for use in the teaching of music appreciation in the classroom.

Credit: 2 semester-hours

MUSIC 407. *The Development of the Opera*

This course deals with the origin, development, and characteristics of opera in the Italian, French, German, and Russian schools. Class analyses are made of representative operas of these schools. The content of this course is related to the Saturday afternoon broadcasts from the Metropolitan Opera, New York City. Special attention is given to building an ear repertory of operatic music heard over the radio.

Credit: 2 semester-hours

MUSIC 408. *Wagner Music Dramas*

This course deals with the operas and music dramas of Richard Wagner. It includes a study of Wagner's artistic ideals and their application to his compositions.

Credit: 2 semester-hours

MUSIC 409. *Counterpoint*

This course aims to provide a practical treatment of counterpoint for music students. It includes analysis of the works of the Sixteenth Century masters of vocal polyphony with enough of original work to insure a grasp of the principles involved.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 410. *Composition*

This course aims to develop the creative power of the student in the composition of small vocal and instrumental forms. Special attention is given to the functional aspects of composition in word setting, writing accompaniments, and improvisation.

Prerequisite: MUSIC 202

Credit: 2 semester-hours

MUSIC 413. *Masters of the Symphony*

This course aims to provide the student with an understanding and appreciation of the classic and romantic symphony through the study of the symphonies of Haydn, Mozart, Beethoven, Schubert, Schumann, and Brahms.

Credit: 2 semester-hours

MUSIC 414. *Modern Symphonic Forms*

This includes a study of the post-romantic symphonies of Bruckner, Mahler, Dvorak, Franck, Tschaikowsky, and Sibelius; the symphonic poems of Strauss, Smetana, and Debussy, and the orchestral suites of Rimsky-Korsakoff, Ravel, and Stravinsky.

Credit: 2 semester-hours

MUSIC 416. *Music in Modern Society*

This course aims to interpret the nature, function, and forms of music in modern society in terms of the social, political, and cultural forces which have shaped it. It includes a study of the music of the church, royal patrons of music, nationalism in music, music and politics, music and industry, and music and entertainment. Because of the social interpretation given music, this course is particularly recommended to majors in the social studies.

Credit: 2 semester-hours

MUSIC 418. *Music of Russia*

This course provides a survey of Russian music from the Czarist regime to the modern Soviet. It aims to interpret Russian music in terms of the social, political, and cultural forces which have shaped it.

Credit: 2 semester-hours

MUSIC 420. *The Art Song*

This course provides a survey of the art song and includes a detailed study of the art songs of Beethoven, Schubert, Schumann, Brahms, Wolf, and Strauss. Special attention is given to the relation of music and poetry.

Credit: 2 semester-hours

MUSIC 422. *Chamber Music*

This course provides a survey of chamber music and includes a detailed study of the string trio, quartet, and quintet by classic, romantic, and modern composers. It includes the works of Mozart, Haydn, Beethoven, Schubert, Brahms, Debussy, Bartok, and Schoenberg. The content of this course is related to the current musical season in New York.

Credit: 2 semester-hours

MUSIC 423. *Choral Masterworks*

This course provides a survey of choral masterworks from Palestrina to Stravinsky. It includes a detailed study of Bach's *B Minor Mass*, *St. Matthew Passion*, Handel's *Messiah*, Beethoven's *Missa Solemnis*; Mendelssohn's *Elijah*; Verdi's *Requiem* and other great choral works. The content of this course is related to the current musical season in New York City.

Credit: 2 semester-hours

MUSIC 424. *A Survey of Wind Instrument Music*

This course includes music for full band, small ensembles, and solos with emphasis on literature available for brass and wood-wind players in high school. A laboratory band as well as numerous small ensemble groups are formed by members of the class so that performance of all music under consideration is possible. Special attention is given the music originally composed for wind instruments. New music from all publishers is available for examination and evaluation.

Credit: 4 semester-hours

MUSIC 425. *Music of the Romantic Period*

This course deals with the romantic spirit in music as expressed in the works of Schubert, Schumann, Mendelssohn, Chopin, Berlioz, Liszt, and others. It includes a study of program music, piano and song literature, and the rise of national schools of musical composition. Representative works are studied through performance, recordings, and radio listening. Special attention is given to parallel aspects of Romanticism in literature and the visual arts.

Credit: 2 semester-hours

MUSIC 426. *Survey of Music Literature*

This is a survey course in Music Literature and includes a study of folk song, art song, oratorio, opera, idealized dance forms, instrumental suite, sonata, symphony, and symphonic poem. Abundant use of musical illustration, directed listening, and music making acquaints

the student with great masterpieces of music which should be the possession of every generally cultured person. This course is designed for the general student and aims to make intelligent and appreciative consumers of music. It is a non-technical course and attempts to make intelligent and appreciative radio-listeners and concert goers. Special attention is given to the relation of music to English literature and the social studies.

Credit: 2 semester-hours

MUSIC 428. *Music of Twelve Great Nations*

This course aims to increase understanding among people through a study of the folk and related art music of twelve great nations. Special attention is given to the social, economic, political, and cultural backgrounds of the music of these nations. Because of the social implications of this music this course is recommended particularly to teachers of the social studies. Musical illustrations are given at the piano, through group singing, and through recordings.

Credit: 2 semester-hours

MUSIC 429. *A Cappella Choir and Choral Conducting*

This course deals with the theory and practice of the *a cappella* choir. It includes a study of the principles of group tone production, phonetics as related to singing, tuning, posture, techniques of choral conducting, interpretation, and score reading. A feature of this course is the study of a selected list of choral literature suitable for use in school, church, and community. Outstanding students are given an opportunity to conduct the College A Cappella Choir.

Prerequisite: MUSIC 301

Credit: 2 semester-hours

MUSIC 460. *Musical Studies in Europe*

This field-study course gives an opportunity to study by direct observation major European musical events of the summer season together with visits to famous places in the history of music. Beginning on July 2nd the tour extends to September 3rd covering the countries of France, Germany, Austria, Switzerland, the Netherlands, and Italy. Among many other things opportunities are provided to attend the Richard Wagner Festival in Bayreuth and the Salzburg Musical Festival and to visit the musical shrines and museums in Vienna and the LaScala Opera House and museum in Milan. Famous places such as London, Paris, Rome, Florence, Venice, Amsterdam, Frankfurt, Stuttgart, and Lucerne are included in the itinerary. Students who are registered for credit are required to present a written report at the end of the trip.

Credit: 6 semester-hours

MUSIC 462. *Music and the Related Arts*

This course deals with the relation of music to painting, literature and the dance. It includes a study of aesthetic principles common to these arts and makes wide application in music, painting, literature, and the dance.

This course consists of three parts: Music and painting, music and literature, and music and the dance.

Credit: 2 semester-hours

MUSIC 490. *Survey of Choral Materials for Use in Public Schools*

This course provides a survey of the choral repertoire for accompanied and a capella groups, for changed, unchanged, changing, and mixed voices. Criteria for evaluating available materials, program building for all school needs, including holidays, festivals, radio and television performances, are an integral part of the course. The members of the class comprise a laboratory chorus for the study of the repertoire. The course also includes historical and stylistic characteristics of the choral repertoire. Materials for small groups as well as the large ones are studied.

Prerequisites: MUSIC 301 and MUSIC 429 or their equivalents

Credit: 2 semester-hours

MUSIC 491. *Methods and Materials for Teaching Woodwind Instruments*

This course covers the pedagogy of all the woodwind instruments: flute, oboe, clarinet, bassoon, and saxophone. Attention is given to the problems of teaching individual students and to class procedures. Demonstration lessons, with criticism by instructor and students are provided. Woodwind literature is presented in all aspects, including study materials, solos, and ensemble music. Equipment is studied with reference to the selection, purchase, care, and adjustment of all woodwind instruments, mouthpieces, and reeds.

Credit: 2 semester-hours

MUSIC 499A. *Problems in the Teaching of School Music*

This is a post-student teaching course. It aims to (1) evaluate student-teaching experiences; (2) give an opportunity to the student to share with his classmates the problems encountered in student teaching and to seek a possible solution for the same; (3) meet shortages in teacher preparation not provided for in previous courses; (4) give the student a unified view of school music education before he enters the teaching field. The content of this course is determined largely by the expressed needs of the students.

Credit: 2 semester-hours

MUSIC 499B. *Workshop in School Music*

This course is designed primarily for music teachers-in-service who wish to work out projects for use in their respective schools. The content of this course is determined by needs in the field. It may include folk song dramatizations, small vocal and instrumental ensembles, the integration of music with other subjects in the curriculum, music for boys, visual aids in music pageants, festivals, and materials for special programs. This course provides the teacher with a number of units of work suitable for classroom use.

Credit: 2 semester-hours

HEALTH EDUCATION 401. *Methods and Materials in Health Education*

This course prepares the teacher to assume the responsibility for organizing and conducting a program of health instruction. The coordination of health with other subject-matter fields and the evaluation of textbooks and audio-visual materials are given special consideration.

Credit: 2 semester-hours

HEALTH EDUCATION 407. *Prevention and Care of Athletic Injuries*

This is a lecture and laboratory course designed to acquaint the student with ways to prevent and to care for the common injuries sustained in athletics.

Credit: 2 semester-hours

HEALTH EDUCATION 408. *Driver Education**Part I*

This part consists of a minimum of 40 hours of class recitations and discussions for which home reading and study have been assigned. The following topics are included: (1) history and development of driver education and training programs; (2) objectives of driver education; (3) local, state, and national traffic safety programs; (4) driver qualifications; (5) psycho-physical testing; (6) curriculum content of school courses in driver education and training; (7) construction, operation, and maintenance of automobiles; (8) traffic laws and driver licensing; (9) traffic engineering; (10) pedestrian education and protection; (11) equipment for teaching driver education; (12) liability, costs, and insurance; (13) planning driver education as a part of the daily program of the high school; (14) public relations; (15) records and reports; and (16) visual aids in teaching driver education.

Part II

This part consists of a minimum of 20 hours devoted to the following: (1) behind-the-wheel instruction; (2) demonstrations and student-teacher practice in the car; and (3) road tests in traffic. Home reading and study are required in preparation for these projects.

Prerequisite: License to drive a car with three years of driving experience with satisfactory driving record

Credit: 3 semester-hours

HEALTH EDUCATION 411. *School Health Services*

The student is familiarized with the health services available in the school. The part which the teacher plays in coordinating his activities with the school medical staff is emphasized.

Credit: 2 semester-hours

PHYSICAL EDUCATION 404. *Tests and Measurements in Physical Education*

This course is designed to acquaint students majoring in physical education with the history of measurement and evaluation in this field and to understand current trends and practices. Various tests in general qualities and traits relating to motor performance and tests relating to sports skills are presented to and administered by the students. Test evaluation and construction of written test questions are discussed. Methods of treating statistical data relating to physical education are presented.

Credit: 2 semester-hours

PHYSICAL EDUCATION 405. *Methods and Materials of Physical Education in the Secondary Schools*

Analysis of the program of physical education in the secondary school; criteria for the selection and grade placement of activity; consideration of method and teaching techniques; construction of teaching units and lesson plans; and problems relating to program planning, time allotment, facilities, sources of material, and program evaluation constitute the content of this course.

Credit: 2 semester-hours

PHYSICAL EDUCATION 409. *Organization and Administration of Physical Education*

The details of organizing the units of the physical education programs are discussed. Various topics, such as legislation, financing, curriculum construction, grading, excuses, plant facilities, supplies and equipment, and office management are considered.

Credit: 2 semester-hours

PHYSICAL EDUCATION 410. *Water Safety and First Aid*

This course includes intensive instruction in swimming, diving, water sports, boating, canoeing, water safety, and first aid. Students can qualify for Red Cross certificates during this course.

Credit: 2 semester-hours

PHYSICAL EDUCATION 411. *Organization and Administration of Athletics*

The purpose of the course is to offer practical suggestions and aids for the managing of affairs of an athletic program to those who expect to become teachers, supervisors, and directors of physical education.

The items discussed include athletic eligibility, management, equipment, awards, finances, budgets, safety, maintenance, planning of facilities, junior and senior high school athletics, and current athletic trends.

Credit: 2 semester-hours

PHYSICAL EDUCATION 412. *Organization and Administration of Recreation*

This course is designed to develop an understanding of the philosophy, scope and values of recreation in our contemporary life. Program planning, suitable activities for various age levels, and publicity and promotion are discussed. There are two hours of lecture-recitation per week.

Credit: 2 semester-hours

THE NEW JERSEY STATE SCHOOL OF CONSERVATION

The six State Colleges, the State Department of Education, and the State Department of Conservation and Economic Development jointly operate the New Jersey State School of Conservation at Lake Wapalanne in Stokes State Forest, Sussex County. Credit for the courses given at the New Jersey State School of Conservation may be applied toward the Master's degree at the New Jersey State Colleges, subject to approval in advance by the institution concerned. Students are advised to check with their advisers relative to the application of these credits towards graduate degrees.

The following courses may be offered at the New Jersey State School of Conservation. For complete course descriptions, please refer to the departmental write-ups appearing in this bulletin. Special descriptive announcements may also be had by writing to the New Jersey State School of Conservation, Branchville, New Jersey.

FINE ARTS DEPARTMENT

Fine Arts 415. *School Arts and Crafts with Native Materials*

GEOGRAPHY DEPARTMENT

Geography 420. *Field Geography and Conservation*

INDUSTRIAL ARTS DEPARTMENT

Industrial Arts 442. *Conservation of Basic Industrial Materials*

Industrial Arts 443. *The Use of Basic Industrial Materials in Industry*

EDUCATION DEPARTMENT

Education 440. *Camping Education*

Education 441. *Conservation Education*

Education 442. *Practicum in Camp Leadership*

Education 444. *Practicum in Conservation Education*

Education 480. *Field Science for Elementary Teachers*

Education 539. *Guidance in the Elementary School*

HEALTH AND PHYSICAL EDUCATION DEPARTMENT

Physical Education 410. *Water Safety and First Aid*

SCIENCE DEPARTMENT

- Science 405. *Field and Laboratory Studies in Science*
- Science 411. *Problems in Field Studies in Science*
- Science 412. *Field Studies in Science: Biological*
- Science 413. *Field Studies in Science: Physical*
- Science 414. *Conservation of Plants and Animals*
- Science 415. *Conservation of Soil and Water*
- Science 419. *Field Science and Conservation*
- Science 420. *Water Supply and Conservation Problems*

SOCIAL STUDIES DEPARTMENT

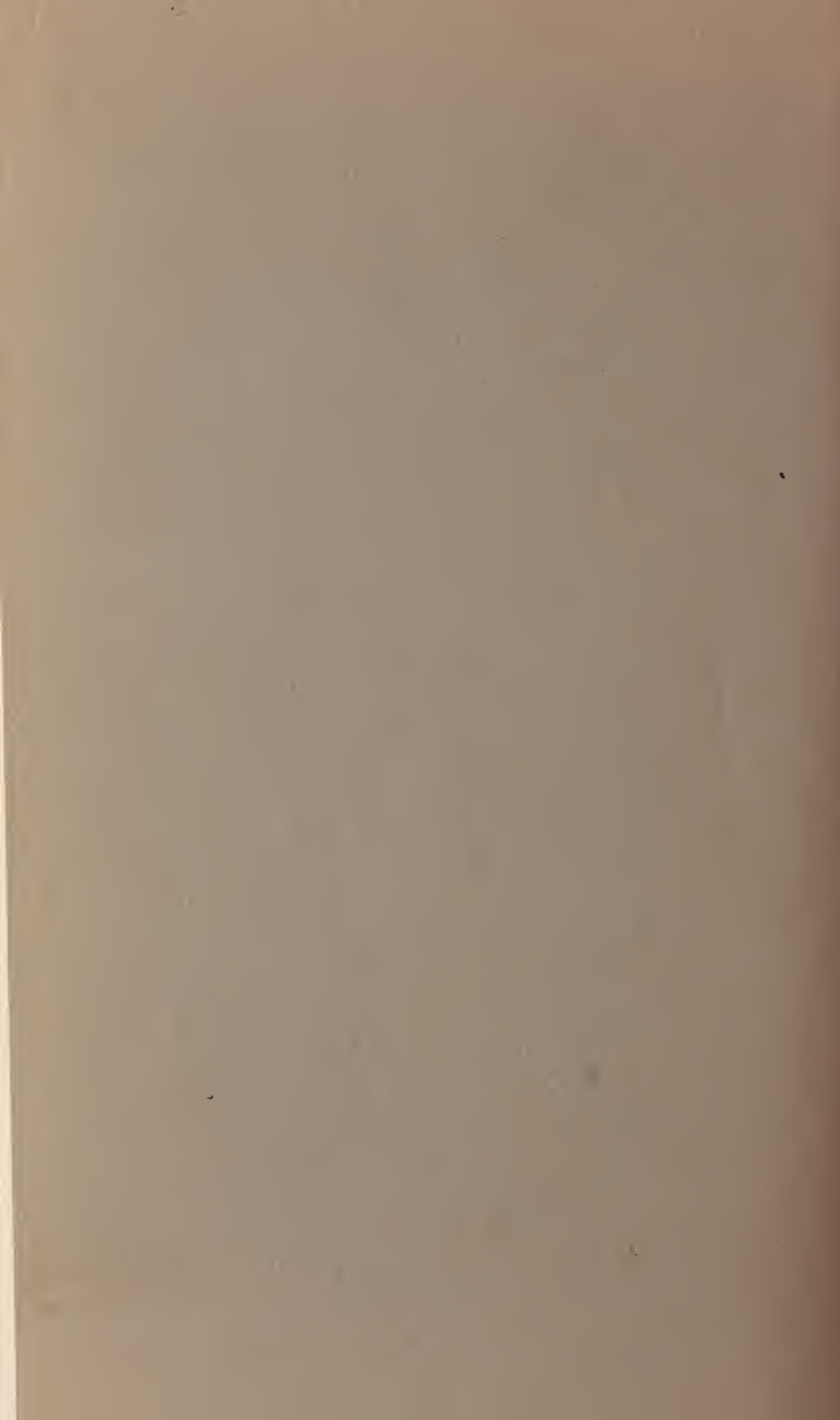
- Social Studies 477. *Rural Sociology*
- Social Studies 482. *Conservation and Rural Economic Life*
- Social Studies 494. *Social Studies and Conservation*

INDEX

	PAGE
Administration	5
Montclair State College	5
Administrative Officers—Graduate Division	5
Graduate Council	5
State Officials	5
Assistant Commissioner for Higher Education	5
Commissioner for Higher Education	5
Director of Teacher Education and Certification	5
State Board of Education	5
Administration of Graduate Division	10
Admission and Matriculation for the Master's Degree	13
Matriculation procedures	13
Requirements for matriculation	13
Admission to the Graduate Division	14
Types of Admission	14
Admission of Veterans	14
Procedures	14
Application for Conferment of Degree	16
Business Education Department	21
Course Offerings	23
Graduate Courses	23
Senior-Graduate Courses	27
Graduate Program of Studies	22
Master of Arts Degree in Business Education	22
Organization of Department	21
Certification Students	12
General Procedures	12
Master's Degree	12
Student Teaching	12
Course Numbering	15
Implications	15
Education Department	31
Course Offerings	33
Graduate Courses	33
Senior-Graduate Courses	44
Course Requirements for the A.M. Degree in:	
Administration and Supervision	31
Personnel and Guidance	32
Organization of Department	31
English Department	51
Course Offerings	53
Graduate Courses	53
Senior-Graduate Courses	61
Organization of Department	51
Requirements for Graduate Study in the English Department	51
Faculty	6
Adjunct Faculty	7
Graduate Faculty	6
Library and Auxiliary Services	7
Fees	17
Fine Arts Courses	140
Foreign Language Department	64
Graduate Program of Studies	64
Organization of Department	64

	PAGE
General Restrictions	17
Geography Courses	143
Health Education Courses	153
History of College	9
Industrial Arts Department	65
Course Offerings	67
Graduate Courses	67
Senior-Graduate Courses	69
Graduate Program of Studies	65
Master of Arts Degree in Industrial Arts Education	65
Organization of Department	65
Library Facilities	10
Living Accommodations for Graduate Students	10
Location of College	9
Master's Degree Major Areas	19
Master's Thesis	18
Procedure and Form for Thesis Writing	18
Mathematics Department	72
Course Offerings	74
Graduate Courses	74
Senior-Graduate Courses	81
Organization of Department	72
Requirements in Mathematics Department	72
Music Courses	148
New Jersey State School of Conservation	156
Organization	156
Course Offerings	156
Organization of College	11
Part-Time and Extension Division	11
Regular Undergraduate Division	11
Other Courses That May Be Used as Electives	140
Fine Arts Courses	140
Geography Courses	143
Health Education Courses	153
Music Courses	148
Physical Education Courses	154
Physical Education Courses	154
Professional and Academic Status of College	20
Accreditation	20
Purposes of the College	11
Service to Certification Students	11
Service to Graduate Students	11
Service to Undergraduate Students	11
Rating System	17
Grades	17
Requirements for the A.M. Degree	15
Comprehensive Departmental Examination	16
Credit-hours—Total	15
Education Courses	15
Level of Courses	16
Major Field	15
Prerequisites	15
Certification	15
Undergraduate Major Field	15
Research	16
Residence	16
Scholastic Average	16
Thesis	16
Time Limit	16
Research	18
Residence Requirements for Master's Degree	14

	PAGE
Science Department	84
Course Offerings	86
Biology	86
Graduate Courses	86
Senior-Graduate Courses	87
Chemistry	89
Graduate Courses	89
Senior-Graduate Courses	90
Physics	93
Graduate Courses	93
Senior-Graduate Courses	95
Science	98
Graduate Courses	98
Senior-Graduate Courses	98
Organization of Department	84
Requirements for the A.M. Degree in Science	85
Service Charges	17
Social Studies Department	102
Course Offerings	104
Graduate Courses	104
Senior-Graduate Courses	107
The Americas	111
Ancient and Medieval History	107
Background Studies in American Life	121
Economics	113
Field Studies in American Life	117
Institutes and Workshops	121
International Affairs	112
Modern European History	108
Philosophy	117
Political Science	116
Sociology	114
United States History	109
Organization of Department	102
Requirements in the Social Studies Department	102
Speech Department	128
Course Offerings	130
Graduate Courses	130
Senior-Graduate Courses	134
Organization of Department	128
Requirements for the A.M. Degree in Speech	129
Student Load	15
Transfer of Credits for Master's Degree	14



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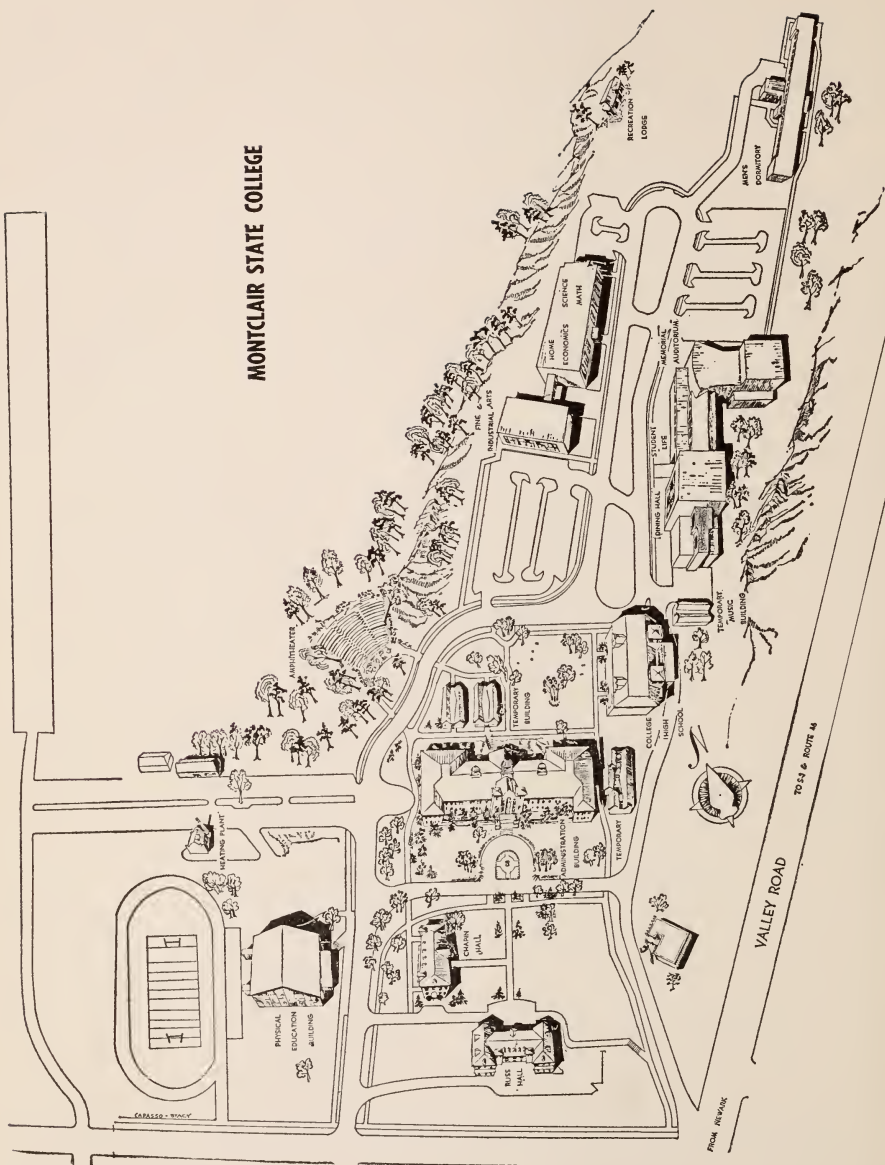
MONTCLAIR STATE COLLEGE



**GRADUATE BULLETIN
1962-1963**

UPPER MONTCLAIR, NEW JERSEY

MONTCLAIR STATE COLLEGE



BULLETIN

OF

Montclair State College

GRADUATE DIVISION

MONTCLAIR STATE COLLEGE

Upper Montclair

1962

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TABLE OF CONTENTS

Officers of Administration	Page 5
Graduate Faculty	6
GENERAL INFORMATION	9
History	9
Location	10
Professional and Academic Status	10
Library	10
Administration	11
Graduate Faculty	12
Purposes	12
Graduate Point of View	13
Master's Degree Programs	14
Admission and Matriculation	15
Certification	18
Requirements for A. M. Degree	19
Graduate Research	22
Program Policies	23
DEPARTMENT OF BUSINESS EDUCATION	27
DEPARTMENT OF EDUCATION	37
DEPARTMENT OF ENGLISH	65
DEPARTMENT OF FOREIGN LANGUAGES	79
DEPARTMENT OF INDUSTRIAL ARTS EDUCATION	84
DEPARTMENT OF MATHEMATICS	89
DEPARTMENT OF SCIENCE	100
DEPARTMENT OF SOCIAL STUDIES	117
DEPARTMENT OF SPEECH	137
OTHER COURSES THAT MAY BE USED AS ELECTIVES	153
Fine Arts	153
Geography	158
Music	163
Health Education	164
Physical Education	165
New Jersey State School of Conservation	167

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Graduate Division

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ROSE METZ	Secretary, Summer, Part-Time and Extension Division and Graduate Division
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JEROME M. SEIDMAN, Ph.D.	Associate Professor of Psychology
HORACE J. SHEPPARD, A.M.	Associate Professor of Business Education
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RICHARD W. TEWS, Ph.D.	Professor of Physical Education
ELIZABETH T. VANDERVEER, Ed.D.	Professor of Business Education
RALPH A. VERNACCHIA, A.M.	Associate Professor of Fine Arts
HAZEL M. WACKER, Ed.D.	Associate Professor of Physical Education
RALPH WALTER, Ed.D.	Professor of Education
HARVEY LeROY WILSON, Ed.D.	Professor of Music
FOSTER L. WYGANT, Ed.D.	Assistant Professor of Fine Arts
FREDERIC H. YOUNG, Ph.D.	Associate Professor of English

EMERITUS FACULTY

HARRY A. SPRAGUE, Ph.D.	President Emeritus
DAVID R. DAVIS, Ph.D.	Professor Emeritus of Mathematics
ELWYN C. GAGE, Ph.D.	Professor Emeritus of Social Studies
CHARLES E. HADLEY, Ph.D.	Professor Emeritus of Biology
VIRGIL S. MALLORY, Ph.D.	Professor Emeritus of Mathematics
EDNA E. McEACHERN, Ph.D.	Professor Emeritus of Music
HARLEY P. MILSTEAD, Ph.D.	Professor Emeritus of Geography
RUFUS D. REED, Ph.D.	Professor Emeritus of Chemistry
W. SCOTT SMITH, Ph.D.	Professor Emeritus of Education

GENERAL INFORMATION

HISTORY AND DEVELOPMENT OF THE GRADUATE DIVISION

In 1908 Montclair State College began its teacher-education program as a two-year normal school. In 1927, by action of the State Board of Education, it was changed to a State Teachers College with four-year curricula leading to a Bachelor of Arts degree and certification to teach in the secondary schools of the State. Extension courses were instituted in 1929, and summer sessions in 1930, to enable teachers who held only a diploma and a teacher's certificate to obtain a Bachelor's degree.

Subsequently, to permit teachers to continue their professional training and receive graduate credit for courses taken in accordance with organized programs of advanced work, the State Commissioner of Education, at the request of the College, recommended, and the State Board of Education authorized, in June, 1932, the establishment of appropriate graduate programs leading to the Master of Arts degree, which the College was empowered to grant. Graduate studies were first offered in the summer of 1932 and have been continued in all regular and summer sessions since that time.

In 1937, the Middle States Association reviewed and accredited the graduate program and has since done so regularly, as has the American Association of Colleges for Teacher Education, until this function was assumed by the National Council for the Accreditation of Teacher Education. In 1948, the Graduate Committee was formed as a sub-committee of the Administrative Council to co-ordinate the graduate work of the various departments participating in it and to establish policies and standards appropriate to Master's degree programs. Since 1956, this Committee, under the title of Graduate Council, assumed greater responsibility for the conduct of graduate work.

On July 1, 1958, by action of the State Board of Education, the name of the College was changed to Montclair State College. Its function, however, continues to be that of a professional school devoted primarily to serving the interests of secondary education in this State.

The last decade has witnessed a rapid but orderly expansion of the entire College. The construction of additional modern physical facilities, the development of a graduate faculty as an identifiable entity, and the establishment of new and appropriate degree programs, have kept pace with both the increasing graduate student enrollment and the educational needs of New Jersey.

Currently there are more than 1,500 students registered in the various courses of this division, with approximately 800 students

matriculated in ten different academic programs leading to the Master of Arts degree.

LOCATION

Situated on the northern boundary of Upper Montclair, the College is approximately three miles north of the center of the town of Montclair and twelve miles west of New York City. The main entrance is at the intersection of Valley Road and Normal Avenue. Public transportation is available on the Greenwood Lake Division of the Erie-Lackawanna Railroad and on Public Service bus routes (Nos. 60 and 76 connect with the Erie-Lackawanna Railroad in the town of Montclair). Other bus lines serve the campus from New York, Newark, the Oranges, and Paterson. The junction of Highways Nos. 46 and 3 is located about one mile north of the campus. The Garden State Parkway connects with these highways close to the College.

PROFESSIONAL AND ACADEMIC STATUS OF THE COLLEGE

Accreditation and Memberships

Montclair State College is a fully accredited member of the Middle States Association of Colleges and Secondary Schools. In addition, the National Council for the Accreditation of Teacher Education has granted it full accreditation for the preparation of elementary and secondary school teachers, and school service personnel, with the Master's degree as the highest degree approved. Credits are exchangeable among colleges and universities which are members of regional and national associations to the extent to which the degree requirements of individual institutions permit the acceptance of transfer credit.

The College holds memberships in the American Association of Colleges for Teacher Education, the American Council on Education, The Association of State Colleges and Universities and the New Jersey Association of Colleges and Universities. Graduates of the College are accepted for membership in the American Association of University Women.

THE COLLEGE LIBRARY

Conveniently located on the main floor of College Hall is the College Library of 80,000 volumes, with two large reading and reference rooms and three smaller reading rooms housing the Music Collection and the Curriculum Laboratory and Textbook Exhibit. The Textbook Exhibit of over 5,000 volumes includes the most recent textbooks in all subjects on both the elementary and secondary

levels and curricula from the majority of communities and counties of New Jersey, as well as outstanding curricula from other states. Some of the Library's special collections include the Webster Memorial Collection of Modern Poetry, a collection which contains many first editions and autographed copies; a group of early science textbooks; the Hatch collection of Lincoliana; the Finley Memorial Science Library which consists of especially selected books in the field of natural history; a special group of books about the State of New Jersey; and the Alumni Memorial Library containing fine editions of books which have been presented to the Library by members of the Alumni Association. This collection is housed in the Alumni Lounge. Of special interest is the China Institute Library, a permanent loan from the China Institute of New Jersey. The Library maintains a complete file of bulletins of the U. S. Office of Education for which this library is designated as an official depository library in the area. The Library is also a depository for the U. S. Census Reports. An up-to-date and widely-used file of pamphlets, maps and pictures, is available to all students.

Most of the books, including the reference collection, are on open shelves. This open-shelf policy applies also to the periodical collection which consists of back issues of over 300 currently received periodicals. Bound volumes of magazines total over 2,500.

Supplementing the College Library is the library of the College High School which is a large, pleasant room housing 4,500 volumes and located in the College High School. The High School librarian works in close cooperation with the members of the College Library staff, particularly in the field of literature for adolescents, in which an extensive and up-to-date collection is maintained.

It is expected that the new Harry B. Sprague Library will be completed in 1963. This building will accommodate 215,000 book volumes, will have a total student seating capacity of 800, and will be completely air-conditioned.

THE ADMINISTRATION OF THE MASTER'S DEGREE PROGRAMS

In the organization of the College, the administrative unit which is responsible for the proper functioning of Master's degree curricula is the Graduate Council. Its membership consists of those administrative officials of the College who are ex-officio closely associated with graduate studies, together with others who represent the various departments offering Master's degree programs. Departmental representatives on the Council are appointed by the President of the College, upon the recommendation of a committee of graduate faculty members whose chairman is the Dean of the College.

The Council's chief function is to develop the basic standards, policies, and procedures which govern the granting of Master's

degrees, to approve new programs, and to engage in a continuous evaluation of all Master's degree work.

Graduate program policies and procedures are put into effect and coordinated by the Chairman of the Graduate Council in cooperation with the various Master's degree program advisors and the Dean of the College, who supervises the activities of the Graduate Division and is responsible to the President of the College. All programs, policies, and procedures are subject to approval by the State Board of Education.

GRADUATE FACULTY

Faculty staff serving the Graduate Division are with few exceptions members of the full-time staff of the College. Those who have attained the rank of associate professor or higher, or have an earned doctorate, are eligible for appointment to the graduate faculty. In addition to those with such evidence of scholarship, a limited number of experienced teachers who have demonstrated excellence in classroom instruction are assigned to teach graduate classes. On occasion, highly competent specialists whose contributions would strengthen and enrich the customary course offerings are invited to supplement the regular faculty by giving courses in their particular areas of professional competence and experience. While the graduate faculty is an identifiable entity its members are not restricted to advanced instruction. Graduate courses taught constitute only a part of the regular schedule of those participating in this program. By distributing the teaching assignments among many of the faculty qualified for graduate courses, it is possible to provide a richer sequence of advanced studies than if the graduate course offerings were limited to specific areas in which the College could maintain full-time graduate specialists.

PURPOSES OF GRADUATE STUDY

Montclair State College continues to be a professional school devoted primarily to the interests of secondary education. This objective is the controlling factor in the development of the curricula, teaching procedures, extra-curricular activities, and college spirit. The major goal of all its courses is the development of the competence of the teacher as a professional person.

The Master of Arts degree program is planned to meet the increasing needs of school systems for educational personnel with advanced proficiency and leadership ability. For this reason graduate courses of study provide the varying patterns of advanced work appropriate in those areas of specialization for which Master's degree curricula have been developed.

Graduate courses are organized to serve the interests of two specific groups of students:

- Group I Those who wish to matriculate for the degree of Master of Arts: graduates of accredited liberal arts and professional colleges, secondary school teachers, supervisors, principals, and other school administrators, all of whom must be graduates of approved colleges.
- Group II Those who do not wish to matriculate for the degree: students who hold graduate degrees, but who wish to continue their professional preparation; college graduates who wish to take courses leading toward secondary school certification; students who are matriculated for advanced degrees in other colleges and universities and who plan to transfer their credits; special students taking courses for cultural purposes without reference to credit.

THE GRADUATE POINT OF VIEW

While many of the attributes, objectives, and curricula of the undergraduate major programs are reflected in the philosophy of the curricula leading to the Master's degree, its administrative patterns, attitudes, and services extend upward and are of a progressively advanced character. Therefore, in its operational framework, graduate work consists of a logically integrated program of advanced, specialized courses based on an undergraduate major and/or other adequate background.

Because of its very nature, graduate work calls for the highest performance on the part of the student with ability, perseverance, and scholarly interests. It is expected that each individual will supply the continuing motivation essential to attain the professional growth which is the ultimate aim of advanced study in teacher education.

The objective in each of the Master degree curricula is to develop a greater degree of professional competence in the basic subject matter of the major or area of specialization, knowledge of the current literature relating to it, and a feeling of confidence on the part of the student in his own ability to use and interpret the results of the reported investigations of others.

The various degree programs also provide the background and auxiliary tools needed for study in depth of a given area. Through the basic research courses, seminars, term papers, research reports, and special problem courses, or in the preparation of a thesis, the student finds in disciplined investigation the essential opportunities for satisfy-

ing individual curiosity and the development of personal and professional growth.

There is also in each program a chance for the scholar to enrich his general education through appropriate elective experiences which will provide breadth of study. While basically the advanced work of a teacher should be such as to increase his classroom effectiveness, it should also help him to continue to grow as a person of learning as well as a person of skills.

Finally, the classroom climate and course organization should be such as to encourage responsible individual initiative, extensive reading, problem solving inquisitiveness, and creative thinking, which are the means to professional academic maturity. Each student should consider himself as a co-worker with other students, scholars, and teachers in a cooperative intellectual endeavor on a high level.

MASTER'S DEGREE MAJOR AREAS

It has been the policy of the College administration to limit its Master's degree commitments to those areas in which its staff and facilities permit it consistently to offer work of high quality. Majors in graduate work are offered in the fields of Administration and Supervision, Business Education, English, Industrial Arts, Mathematics, Personnel and Guidance, Science, Social Studies, and Speech. There is also a program in Foreign Languages involving study abroad, which is limited to Montclair State College graduates.

MASTER'S DEGREE PROGRAM PATTERNS

The curriculum pattern for each of the Master's degree programs includes experiences in four areas: 1) professional education, 2) subject matter specialization, 3) research, and 4) general education electives.

1. *Basic Professional Education*

A limited portion of the graduate program is assigned to education courses which will permit the student to continue exploration of philosophical, psychological, sociological, and historical phases of his professional training in advanced courses in this area.

2. *Area of Concentration*

The main emphasis in the graduate study program of each student will be devoted to increasing the student's knowledge and competence in his field of specialization.

3. *Research*

Since it is important that each graduate scholar should have experience in the systematic acquisition, organization, and

analysis of information relative to some problem or study in his field of specialization, opportunities are provided for a basic course in the techniques and procedures of research, as well as in the student's area of specialization through course work, research seminars, and thesis writing.

4. *General Education Electives*

Opportunities are provided in this category to undertake several broadening intellectual experiences which will extend the student's study outside of his specialty and into other areas in the academic disciplines.

In the selection of the electives, students are cautioned about a choice of highly specialized single-purpose technical and professional skill courses. While such studies may constitute graduate work, and are appropriate for certain Master's degree programs in the area of specialization, they do not in general serve the purpose of the general education electives, which is to contribute to the individual's cultural development.

For those with a strong foundation in the liberal arts, the credits in the elective group might be used to strengthen their competence in a second area of certification, or in a discipline related to the major area.

Within this framework a definite program of course possibilities should be worked out to meet the special needs of the individual and the requirements of each department. This will permit a sequence of studies which will complement his previous education so that his resources of skill and knowledge are properly balanced, and he is given the most advanced work for which he is qualified.

Thus, enlightened and responsible program-planning in the development of each student's plan of graduate study requires informed and consistent guidance.

ADMISSION AND MATRICULATION FOR THE MASTER'S DEGREE

1. The applicant for admission to any of the Master's degree programs should be a graduate of an accredited college or university and must present evidence of his qualifications for advanced study as shown by a high scholastic record, professional teacher-education training, and experience.

Each department may require an applicant with a doubtful undergraduate record or a bachelor's degree from a non-accredited institution to take qualifying examinations, such as the Graduate Record Examination or any other suitable test it may consider necessary, to determine a student's acceptability for matriculation in the Master's degree program of that department.

2. Actual matriculation (i.e., formal and official acceptance in writing by the Graduate Office in a program leading to the Master's degree) may be deferred by the student for good reason until no more than eight semester hours of graduate credit have been earned. However, in the student's own interest it is strongly recommended that he determine his eligibility for matriculation before initiating a program of graduate study. In so doing he will receive guidance and counsel, thereby avoiding the disappointment which may occur when non-matriculated students pursue work of their own selection.
3. Prior to admission and matriculation, each student indicates the Master's degree area in which he will complete such courses as are prescribed. Upon formal acceptance a work program is made out in conference with a departmental advisor appointed for this purpose.
4. To be eligible for matriculation in a major subject area, a student must present evidence, in the form of an official undergraduate transcript, of a strong background of courses in the chosen area of specialization or major field. The minimum amount of work in the undergraduate major required for acceptance varies from 18 to 24 semester hours, or more for certain of the highly specialized majors, in accordance with the entrance requirements established for each of the various Master's degree programs. These requirements are indicated in the departmental statements describing the various programs.
5. Since the College is a professional teacher-training institution and its Master's degree curricula in the subject matter areas are designed to contribute to the increased effectiveness of the classroom teacher, applicants for matriculation in these programs should be certified to teach the subjects of the major in the chosen area in the State of New Jersey. Applicants who are not so certified should study the information relating to certification and the Master's degree on pages 18 and 19.
6. To be eligible for matriculation in the several professional education programs in the Department of Education, it is required that a student be certified to teach in New Jersey and also to have acquired some successful teaching experience. Two full years of experience are required for acceptance in the program in Administration and Supervision, and one full year for Personnel and Guidance.

Steps in the matriculation process

1. The applicant secures an application form in the Graduate Office which must be completed and returned to that office

together with a check or money order for the required application fee.

2. The applicant will have his college send official transcripts of all college credits (if the applicant is not a graduate of Montclair) to the Chairman of the Graduate Council. The completed application, application fee, and the official transcripts should be on file in the Graduate Office at least one month before the time of registration for graduate courses.
3. After the application and transcripts have been received and a careful preliminary review of the student's undergraduate record and other qualifications have been made in the Graduate Office, the applicant will be invited to confer with the Chairman of the Graduate Council and/or a tentative recommendation will be made as to what action should be taken on the application.
4. The applicant will next confer with the graduate advisor in the department in which he expects to do his work, and if, or when, he is eligible for matriculation the advisor will develop a formal program of courses with him.
5. A final conference with the Chairman of the Graduate Council may be arranged, if necessary. Following this, the applicant will be advised in writing of the decision of the Graduate Council and will be furnished with a statement of the course of study (official Work Program) to be completed within a six-year period.
6. Final action on all applicants is vested in the Graduate Council. For good reason legitimate adjustments may be made at any time in the student's original program, with the approval of his program advisor and confirmation of this action by the Chairman of the Graduate Council. (Amendments of this nature take place on an appropriate form available in the Graduate Office.)
7. As part of the application for matriculation, the student will present to the Graduate Office for his file, a personal statement of his objectives, academic interests, experiences, and any other special matters which will assist those who must assess his readiness for a particular program of graduate work and develop his course of study for the Master's degree.

Types of admission in the degree programs

1. Regular admission for applicants eligible to be fully matriculated.
2. Conditional (granted because specific undergraduate course deficiencies exist).

3. Probational (granted for one summer or semester, to determine a student's scholastic ability).
4. Senior-Graduate (granted only to Montclair State College seniors).

Senior students currently enrolled in the College who have good academic records and who are within sixteen semester hours of graduation may be permitted to take a maximum of eight semester hours of graduate work concurrently with any remaining semester hours to meet the requirements of their A.B. degree and prior to graduation. Such students must have written permission from the chairman of the department concerned, the Dean of the College, and the Chairman of the Graduate Council, and must register for this special work in the office of the Director of Field Services. (To determine his eligibility to receive this permission the student should obtain the appropriate application form from the Registrar's office, which when properly filled out will permit him to have his request considered.) No graduate credit will be given retroactively for work taken in excess of degree requirements.

CERTIFICATION STUDENTS

Students holding bachelor's degrees from other colleges and desiring secondary certification to teach in New Jersey should submit a complete transcript of undergraduate and graduate work to the Secretary of the State Board of Examiners, Office of Teacher Certification, State Department of Education, 175 West State Street, Trenton 25, New Jersey, and request an evaluation so as to determine the subject matter or professional courses that may be lacking for certification in some major area or areas of specialization. New Jersey residents may secure this information from the Superintendent of Schools of the County in which they reside.

Once they have received this evaluation they will be in a position to confer with the Certification Officer of the College, who will assist them in selecting courses offered at the College which will meet certification requirements.

CERTIFICATION STUDENTS AND THE MASTER'S DEGREE

Students holding bachelor's degrees from other colleges must be fully certified to teach in the area of their major specialization by the time the degree is conferred. Students should have completed their supervised student teaching or have had one year of successful teaching experience under provisional certification before they can matriculate for the Master's degree.

Those who lack some of the required preparation for full limited secondary certification, or certification in either professional or special

subjects for both elementary and secondary schools, may need to register for certain undergraduate courses in the 200 and 300 series, which courses will not carry graduate credit. However, if the required professional certification courses are taken in logical sequence, some of them in the 400 series, or above, may be counted toward the limited certificate as well as toward the Master's degree. Students who are interested in correlating their work for certification with some work toward the Master's degree should arrange an advisement interview with the College Certification Officer to determine the possibilities whereby certain courses available might serve these combined purposes.

CERTIFICATION STUDENTS AND STUDENT TEACHING

Graduates of other colleges who wish to do their student teaching through Montclair State College should obtain a statement from the Director of Student Teaching and Placement outlining the conditions under which it can be done. This group will be expected to meet the standards established for Montclair State College students before being assigned for student teaching.

Students who desire to meet the State requirement in supervised student teaching must be approved by the Director of Student Teaching, after which approval they will register for this course in the office of the Director of Field Services. Supervised student teaching does not carry credit toward the Master's degree.

PROCEDURE FOR THE ADMISSION OF VETERANS

A prospective student with the special classification of a veteran should determine his admission status with the Graduate Office before making application for a Certificate of Eligibility for matriculation.

REQUIREMENTS FOR THE MASTER OF ARTS DEGREE

1. A minimum of thirty-two semester hours of graduate credit is required in all departments. Additional hours may be added to compensate for any deficiencies found in the applicant's undergraduate record.
2. Each major department requires a minimum of at least eighteen semester hours of graduate work in the area of specialization.
3. No less than six semester hours of the required total of thirty-two semester hours must consist of professional education courses in the Department of Education.
One two-semester hour course in this group, Education 503, *Methods and Instruments of Research*, is required of all

students matriculated in the Graduate Division and must be taken in residence.

4. To be certain that all Master's degree students will have a reasonable amount of knowledge and experience related to the important area of research, each candidate (matriculated after August 31, 1959) must complete Education 603, *Principles and Practices of Research* for two semester hours, or an equivalent research seminar in the department of his major subject. Education 503, *Methods and Instruments of Research*, is a prerequisite for this required research.
5. An average grade of "B" or better is required for work submitted for the Master's degree. No graduate credit is given for work below "C".
6. The majority of the courses taken or credits earned should be on the 500-600 level.
7. Work for the Master's degree must be completed within six years after the date of matriculation. If an extension of time is required, a request for such extension must be filed with the Chairman of the Graduate Council. The student's progress will then be reviewed and evaluated in accordance with the requirements for the degree as stated in the most recent Graduate Catalog and with the established policy for this type of reinstatement.
8. A comprehensive departmental examination or its equivalent is required in all departments so designed as to constitute the means whereby all the facets of the student's work may be brought to a focus at the end and an assessment made of the extent to which he has achieved his objectives.
This examination may be written and/or oral. The oral phase of the examination will be on an individual basis. The examination is given at least one month before graduation time by the department in which the student does his major work. (The time at which these examinations are scheduled is announced in the Graduate Division's Spring Semester calendar, and on the Graduate Office bulletin board, or the student may ascertain the information by telephoning the Graduate Office. Responsibility to obtain this information is placed upon the student.)
9. Four of the total credits can be satisfied by a thesis which meets the approval of the Graduate Council. In some departments the thesis may be offered in place of the written comprehensive examination. The oral examination may or may

not be required if a thesis is presented in lieu of the written examination.

10. *Residence requirements*

- a. A minimum of thirty-two semester hours of graduate work in residence is required except as noted in item 11.
- b. The student must attend the College as a full-time graduate student for at least one summer session (six semester hours), or one regular semester, to meet this residence requirement.

Fully employed teachers are encouraged to restrict the graduate work carried during the year, and to take advantage of the course offerings in the summer session when their normal professional responsibilities will not interfere with the study expected of advanced students.

11. *Transfer credit*

With the approval of the student's program advisor and the Chairman of the Graduate Council, a graduate of one of the New Jersey State Colleges or the State University may request the transfer of appropriate graduate credits earned. Candidates who are graduates of an accredited college or university other than one of the New Jersey State Colleges, or the State University, and who have matriculated on or after April 12, 1962, may have transfer of appropriate graduate credits earned in a graduate program of an accredited college or university on approval of the Graduate Council. The maximum amount of credit which may be accepted is eight semester hours. The usual procedure is to arrange in advance for this privilege, and to make application for acceptance on a form available in the Graduate Office.

12. *Certification evidence*

To receive final approval by the Registrar as a candidate for the degree, the student must have evidence in his official file to indicate that he has met the certification requirements for the program for which he was matriculated. This evidence may consist of either a photostat of the essential certificate to teach, or a letter of eligibility.

13. *Application for Conferment of the Degree and Attendance at Commencement*

Candidates must file with the Registrar an application for conferment of the degree before November 30 of the college year in which the work is to be completed. Application blanks for this purpose may be secured from the Registrar. The

burden of responsibility for the request rests with the candidate. This is of special significance to the teacher-in-service who may have distributed his graduate work over four or five years.

The student should note that attendance is required at commencement, unless permission for graduation in absentia is granted by the President of the College.

GRADUATE RESEARCH AND THE MASTER'S THESIS

Nature and purpose

Although Master's degree programs may differ considerably in content, in every type some substantial experience in the scholar's approach to the acquisition, preparation, analysis, and interpretation of information is indispensable. The courses and research seminars providing the opportunities for these experiences will introduce the student to research methods in the several disciplines and indicate what and where are the basic sources of information. This will require him to engage in a survey of the professional literature of his major through the development of an approved research investigation. The study may involve either the solution of a complex problem, or it may consist of a series of scholarly reports.

To accomplish this, an advanced research study, essay, or research report is required in all the Master's degree programs by means of the departments' research seminars, for which the basic research methods course, Education 503, provides the prerequisite foundation.

Creative work, or distinguished performance involving intellectual as well as technical mastery, may be substituted in the programs in the arts, music, literature, etc. The essential element in this type of experience is independent work in depth by the student, whatever its form. Whether or not it is carried out in connection with courses is immaterial if the investigation conducted under faculty supervision requires the student to work independently on his own and to demonstrate his capacity to find, assess, organize, treat, and interpret his materials in a scholarly manner.

As the basic style and guide for research reports, investigations, and theses, the Graduate Council has adopted William G. Campbell's *Form and Style in Thesis Writing*. It may be purchased at the College Bookstore.

The Master's Thesis

In addition to the two graduate courses required for the research experiences (Education 503, *Methods and Instruments of Research* followed by the Departmental research seminars), an additional research experience is provided for the exceptional student to write a Master's thesis.

The writing of a Master's thesis is optional. Only those students who have done scholarly work and have given evidence of research ability will be permitted to develop a thesis.

To encourage scholarly students to develop a thesis, a department may accept it as equivalent to the required research seminar, and in lieu of all or part of the final comprehensive examination. Students writing a thesis must receive the approval of their departmental advisor and the Chairman of the Graduate Council, and must register for the course, Graduate 600, *Master's Thesis*, for four semester hours. Information which will aid students submitting a Master's thesis is available in mimeographed form and may be obtained in the Graduate Office.

Students are expected to complete the thesis within one calendar year. An extension of time may be granted by the Chairman of the Graduate Council after consultation with the student's advisor. If granted, the student must re-register for Graduate 600 on a no-credit basis and pay a fee for two semester hours. This extension will be for six calendar months.

INFORMATION RELATIVE TO THE IMPLEMENTATION OF PROGRAM POLICIES

1. *Explanation of the Course Numbering System*

a. *Eligibility for enrollment*

Courses in the 500 and 600 series are open only to graduate students. Those in the 400-499 series and listed in this catalog may be selected by graduate students for graduate credit. When the courses in this series are given for certification and/or the Master's degree programs, they will be open only to those advanced senior-undergraduates with a high scholastic average who receive the written approval of the Dean of the College. (A special form provided for this must be obtained from the Registrar's office.)

Any student, to be eligible for a course, must have completed the logical and sequential prerequisites for it, as well as any specific prerequisites indicated in the course description.

b. *Master's degree credit*

Students registering in graduate credit courses for which they are eligible must understand that in order for such courses to be counted toward a Master's degree, they must conform to the general requirements of a particular degree curriculum, and be in accordance with the official work program. It is most important, therefore, that at each registration

period the student bring with him his copy of the work program, together with his transcripts of graduate work taken at this College so that, with the guidance of the departmental advisor, his course selections from the scheduled offerings will be the most appropriate for meeting his objectives.

c. *Special restrictions for graduate program credit*

1. No credit is granted toward the Master's degree for courses with a grade below "C," or for courses taken more than ten years previously, or for certain specifically designated basic courses on the 400 level which are required for initial certification.
2. No more than eight semester hours of graduate credit taken prior to matriculation, or more than six semester hours of graduate credit in extension (off-campus courses) may be credited toward the Master's degree.
3. No graduate credit is granted retroactively for work taken in excess of undergraduate degree requirements.
4. No graduate credit is allowed for concurrent registration (enrollment) in other colleges without the knowledge and approval of the Chairman of the Graduate Council.
5. No graduate credit is granted for courses in which a student, who has been an auditor, eventually chooses to satisfy the credit requirement for the course, except as approved under change of registration procedures.
6. Since some course numbers have been changed, as indicated in the Graduate Catalog, no course previously taken under one number may receive credit under its new number. The responsibility for avoiding this duplication is placed upon the student.
7. Any course taken by a student as an undergraduate may not be taken again and counted toward the Master's degree, even though the course and the credits associated with it were not required for the Bachelor's degree.

2. *Rating system*

Marks indicating degrees of achievement in the various courses are given in letters A, B, C, D, and F.

A—Excellent

B—Good

C—Fair

D—Poor (No "D" credit may be counted toward the Master's degree.)

F—Failure

Inc.—Incomplete work*
 WP—Withdrawn, passing
 WF—Withdrawn, failing

3. *Retention standard*

The Chairman of the Graduate Council and the student's program advisor may, for good reason, revoke the matriculated status of any one who is found to lack the qualifications of personality, integrity, temperament, emotional adjustment, or physical stamina, or after it has been established that there is evidence of serious unprofessional conduct.

A student who does not maintain an acceptable standard of scholarship (an average of "B" or better) will be placed on probation. If, while he is on probation, his scholarship in courses approved by his advisor does not show marked improvement or if it becomes apparent that he is unlikely to achieve an acceptable standard, he will lose his status as a matriculated student.

4. *Student load*

Graduate work should involve careful and intensive study with ample time to explore areas which may warrant further study. Twelve to sixteen hours of work per semester is considered a full-time program for the graduate student in residence.

For teachers, or others employed full time, six semester hours of work in any one semester shall be the maximum load, with four semester hours being recommended.

In the regular six-week summer session, the maximum load shall be eight semester hours. However, the Graduate Council strongly recommends that the student consider six semester hours of work a full program.

5. *Enrollment regulations and procedures*

Fees and Service Charges

Thirteen dollars (\$13.00) per semester hour to residents of New Jersey and those non-residents who teach in New Jersey public schools.

Fifteen dollars (\$15.00) per semester hour to non-residents of New Jersey who do not teach in New Jersey public schools.

Registration fee two dollars (\$2.00)

Service charge fifty cents (\$.50) per semester hour

Late registration fee five dollars (\$5.00)

Supervised student teaching (if required) .. seventy-eight dollars (\$78.00)

* Where a student has had an unavoidable absence, or presents other good reasons in accord with approved policy, a course may be marked "Incomplete" at the end of a semester or summer session. This mark must be removed by a final grade within eight weeks, or the course cannot be credited and the mark becomes "F" automatically.

Application for matriculation fee five dollars (\$5.00)
Dormitory fees including room, breakfast, and dinner for a summer session, eighteen dollars (\$18.00) a week.
These charges are subject to revision.
All charges are payable during the registration period.

6. *Change of schedule or program*

No student will be permitted to change his scheduled courses without the approval of his advisor and the Director of Field Services. *The deadline for making changes is the last day of the late registration period.* To change from "auditor" to "credit," or vice versa, a student must make formal application not later than the mid-point in the semester. Forms are available in the Graduate Office.

7. *Withdrawal from a course*

A *written notice* filed in the office of the Director of Field Services is required. (Refunds are computed from the date of receipt of such written notice.) Students who do not submit a written notice will receive the mark of "F" in those courses which they cease to attend. Non-attendance at classes or oral or written notification to the instructor does *not* constitute a formal withdrawal.

Students who withdraw after the mid-point in the semester will receive an automatic grade of "F," except in certain very exceptional cases that receive approval.

8. *Information as to course offerings and scheduling*

Regular bulletins are published for the information of those who wish to attend part-time, extension, or summer session courses. These contain a list of course-offerings, time of class meetings, room assignments, and instructors for the scheduled classes. Other information may be obtained from the Director of Field Services, Montclair State College, Upper Montclair, New Jersey.

9. *Programs, regulations, and procedures are subject to change*

The College administration must continuously adapt graduate curricula, rules, course-offerings, and procedures, to meet the changing needs and conditions associated with the special problems incidental to graduate work.

A conscientious and continuous effort will be made to keep students informed of all important changes in the policies or procedures of the Graduate Division; and when basic adjustments are made, the administration of these will be such as to make the transition as satisfactory as possible.

However, each student is given the responsibility of keeping himself informed of the present status of the graduate program and his progress toward the Master of Arts degree.

DEPARTMENT OF BUSINESS EDUCATION

The graduate work in the Department of Business Education is designed to prepare teachers of business education for administrative, supervisory, specialized work or master teaching in the field of business education. In order to attain these objectives the candidate has an opportunity to supplement his undergraduate program and to explore advanced areas of work in accordance with his individual background, experience, achievement, and professional needs.

Graduate work toward the Master of Arts degree in Business Education presupposes the completion of an undergraduate major in business education, or its equivalent. The undergraduate major is based on the requirements as established by the New Jersey State Board of Education. For further details see the Undergraduate Bulletin.

In lieu of four of the thirty-two semester-hours of credit required for the Master of Arts degree, the candidate may write a thesis giving the results of some research in the field of business education or its teaching. This research may be made only after consultation with the Chairman of the Business Education Department. Plans should be made to have the thesis in its final form and approved by the Department of Business Education by May 1st of the year in which the degree is expected to be conferred.

All candidates for the Master of Arts degree in Business Education must pass a comprehensive examination before they are granted the degree. This examination is given early in April and late in July for those candidates anticipating graduation. It is general in nature and is intended to test the candidate's maturity of thought with respect to business education.

GRADUATE PROGRAM OF STUDIES

MASTER OF ARTS DEGREE IN BUSINESS EDUCATION

Division I. Required Education Department Courses (6 s. h. required)

Ed. 503.	Methods and Instruments of Research	2 s. h.
Ed. 509.	Basic Educational Concepts	2 s. h.
Elective	To be chosen on recommendation and approval of the Chairman of the Department of Business Education	2 s. h.

Division II. Research Seminar, Field Work and Thesis (8 to 10 s. h.)

B. E. 501A.	Research Seminar in Business Education	2 s. h.
B. E. 501B.	Evaluation of Current Literature in Business Education	2 s. h.
Graduate 600.	Thesis*	4 s. h.
B. E. 532.	Field Studies and Audio-Visual Aids in Business Education	4 s. h.
	or	
B. E. 533.	Supervised Work Experience and Seminar	4 s. h.

*Division III. Required Business Professional Courses**Group A—(4 s. h. required)*

B. E. 502.	Principles and Problems of Business Education	2 s. h.
B. E. 503.	The Business Education Curriculum	2 s. h.
B. E. 504.	Administration and Supervision of Business Education	2 s. h.
B. E. 505.	Tests and Measurements in Business Education	2 s. h.

Group B—(4 s. h. required)

B. E. 520.	Improvement of Instruction in Business Education	
Part A.	General Business Subjects	2 s. h.
Part B.	Bookkeeping, Accounting, and Business Arithmetic	2 s. h.
Part C.	Secretarial Subjects	2 s. h.
Any part may be elected separately. A minimum of two parts must be completed.		

Division IV. Elective Subject-Matter Courses

(8 to 10 s. h. required—dependent on the total accumulated in Division II—to be selected after consultation with the Chairman of the Department of Business Education.)

* Students writing a thesis will take B. E. 501A and will substitute four (4) semester-hours for the thesis in place of B. E. 501B. This will count as a total of six (6) semester-hours in research and thesis.

THE GRADUATE COURSES

BUSINESS EDUCATION 501A AND B. *Research Seminar in Business Education-Evaluation of Current Literature*

This course deals with research and literature in the field of business education. The emphasis is placed on making the classroom teacher an intelligent consumer of the current research findings and publications related to business education.

Prerequisite: EDUCATION 503

Credit: 4 semester-hours

BUSINESS EDUCATION 502. *Principles and Problems of Business Education*

The purpose of this course is to survey the basic principles and practices of business education. Among the topics considered are: history of the high school business program, purposes, attitudes of management and labor toward education, the relationship of general education to business education, and trends in the field. This course should be scheduled early in the graduate program.

Credit: 2 semester-hours

BUSINESS EDUCATION 503. *The Business Education Curriculum*

This course is a sequel to BUSINESS EDUCATION 502. It deals with the curricula in business education for various levels and types of schools. In this course, the student learns how to evaluate present programs and to make recommendations for needed changes.

Prerequisite: BUSINESS EDUCATION 502

Credit: 2 semester-hours

BUSINESS EDUCATION 540. *Administration and Supervision of Business Education*

This course offers an opportunity to study the problems of organizing, directing, and supervising business education programs. Such matters as the functions of the administrator and supervisor of business education, textbook selection, teacher selection, testing programs, conferences, and equipment and layout are considered. It is a valuable course for prospective administrators.

Credit: 2 semester-hours

BUSINESS EDUCATION 505. *Tests and Measurements in Business Education*

This course deals with constructing, administering, interpreting, and evaluating all types of testing materials in business subjects.

Credit: 2 semester-hours

BUSINESS EDUCATION 516. *Business Organization and Management Problems*

The problems approach is used in this advanced course in considering such topics as business ownership, finances, location and layouts, purchasing, personnel, and managerial controls.

Credit: 2 semester-hours

BUSINESS EDUCATION 518. *Advertising Media*

This course in advertising offers an opportunity to study in some detail the uses of various advertising media such as newspapers, magazines, radio, television, and direct mail, and to evaluate their effectiveness in terms of campaigns.

Credit: 2 semester-hours

BUSINESS EDUCATION 520A, B, C. *Improvement of Instruction in Business Education*

These courses give the experienced business teacher an opportunity to study the content, methods, teaching aids, and evaluation procedures in at least two* of the three specialized fields:

BUSINESS EDUCATION 520A.* *General Business Subjects*

Credit: 2 semester-hours

BUSINESS EDUCATION 520B.* *Bookkeeping, Accounting, and Business Arithmetic*

Credit: 2 semester-hours

BUSINESS EDUCATION 520C.* *Secretarial Subjects*

Credit: 2 semester-hours

Prerequisite: Teaching experience in the field of business education

Note: A minimum of two (2) parts of BUSINESS EDUCATION 520 must be completed.

BUSINESS EDUCATION 532. *Field Studies and Audio-Visual Aids in Business Education*

This course gives the classroom teacher an opportunity to visit and evaluate some of the practices of many business offices, industries, and retailing organizations located in the metropolitan area. It also provides for a study of the many audio and visual aids available for use in business classes.

Credit: 4 semester-hours

BUSINESS EDUCATION 533. *Supervised Work Experience and Seminar*

The graduate student who has not had extensive business experience has an opportunity to work full-time for six weeks during the summer in a business position under College supervision. An evening conference is held weekly to discuss problems related to the work experience program.

Credit: 4 semester-hours

BUSINESS EDUCATION 540. *Auditing*

This course seeks to develop the meaning and techniques of auditing procedure. It includes practice in the fundamental mechanics of auditing as well as in the making of the formal report on an audit.

Prerequisite: 8 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 542A. *Advanced Business Law Cases I*

This course presupposes a knowledge of the basic principles of business law. It is designed to furnish a broader understanding and background in areas requiring considerable training to be effective in the classroom. Cases are concerned with the topics of contracts, negotiable instruments, and insurance.

Credit: 2 semester-hours

BUSINESS EDUCATION 542B. *Advanced Business Law Cases II*

This advanced law course is a continuation of BUSINESS EDUCATION 542A, but course 542A is not a prerequisite. A basic knowledge of the principles of law is, however, required. The course includes a further study of law cases pertaining to bailments, carriers, sales, property, landlord and tenant, torts, and business crimes.

Credit: 2 semester-hours

BUSINESS EDUCATION 543A. *Advanced Accounting I*

The content of this course emphasizes an intensive study of the items making up accounting statements and the principles of evaluation and income determination. Problem solving is an integral part of the course. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 543B. *Advanced Accounting II*

This course is a continuation of BUSINESS EDUCATION 543A, but course 543A is not a prerequisite. Topics treated include consignments, agency and branch accounting, consolidations, receivership accounting, estate and trust accounting. At least eight semester-hours of accounting are required as a prerequisite.

Credit: 2 semester-hours

BUSINESS EDUCATION 544A, B, C, D. *Workshops in Secretarial and Clerical Practice, Advanced Stenography, Typewriting, Office Machines*

These workshops which may run simultaneously provide an opportunity for the study, planning, and development of teaching materials and projects fitted to the particular situation in which the person is teaching. Instruction is on an individual and small-group basis with occasional seminar meetings of the entire group.

Prerequisite: Teaching experience in the field

Credit: 2 semester-hours each

SENIOR GRADUATE COURSES

The following courses are not required for the Master's degree in Business Education. With the approval of the Chairman of the Department, they may be used as elective credits.

BUSINESS EDUCATION 403. *Advanced Dictation and Transcription, II*

This course is designed for the teacher of stenography and transcription who wishes to study the problems of dictation and transcription from the viewpoint of his own class situation and also to improve his skill.

Those who take this course should have had a methods course in stenography and have had at least student-teaching experience.

Credit: 2 semester-hours

BUSINESS EDUCATION 404. *Business Economics*

This course deals with the business aspects of economics as related to immediate and long-range problems; operation and government control of public utilities; taxation, government finance, and labor and management problems.

Credit: 2 semester-hours

BUSINESS EDUCATION 405. *Office Practice—Clerical*

Actual training is given on the 10-key and full keyboard adding listing machines, the rotary and key-driven calculating machines, and the posting machine. Other office skills necessary for the clerical worker are stressed. Limited instruction is provided on the voice-writing and duplicating equipment.

Techniques of job analysis, including job description, job breakdown, and job evaluation are practiced. Supervised work experience is a requirement of this course.

Credit: 3 semester-hours

BUSINESS EDUCATION 406. *Advertising, Principles and Practices*

This course aims to acquaint the student with the social and economic aspects of advertising so that a fair evaluation may be made of its worth as well as its undesirable aspects. Copy appeals, the writing of copy, advertising layouts, and the selection of appropriate

types of media for various advertisements are considered. Emphasis is placed on the research aspects of the subject so important today.

Credit: 2 semester-hours

BUSINESS EDUCATION 407. *Office Practice—Secretarial*

This course familiarizes the prospective teacher of secretaries with the operation of voice-writing and duplicating equipment. The duties of the secretarial worker are studied, with considerable attention being paid to filing. Understanding of office procedures and stenographic skill are strengthened through supervised office assignments and class work projects. Supervised work experience is a requirement of this course.

Credit: 3 semester-hours

BUSINESS EDUCATION 408. *Business Finance*

This course deals with the process involved in the financing of business organizations from the time of their inception and promotion, during operation and expansion, and during the period of reorganization. Problems involving financing by means of stock, borrowed capital, mortgages, bonds, and notes are solved.

Credit: 3 semester-hours

BUSINESS EDUCATION 409. *Consumer Education*

Consideration is given to the role of the consumer in the economy, some of the forces affecting consumer demand, governmental and private agencies aiding the consumer, and the development of intelligent techniques for buying and using consumer goods and services.

Credit: 3 semester-hours

BUSINESS EDUCATION 410. *Advanced Accounting*

This is an advanced course for students who have had two years of accounting. Emphasis is placed on techniques of problem solving. Included are problems relating to basic accounting principles, cost accounting, and intermediate accounting. Considered are the determination of net income on accrual, cash and installment bases; problems of valuation including problems of depreciation, depletion, and amortization; consignments; preparation and analysis of financial statements, including analysis of net change in gross profit and net change in working capital; partnership formation, operation, dissolu-

tion, and liquidation; bankruptcy, reorganization, and recapitalization and consolidated balance sheets and income statements.

Prerequisites: BUSINESS EDUCATION 201, BUSINESS EDUCATION 202, BUSINESS EDUCATION 301, AND BUSINESS EDUCATION 302

Credit: 3 semester-hours

BUSINESS EDUCATION 411. *Tax Accounting*

The purpose of this course is to give a comprehensive picture of the Federal Tax structure. Extensive training is provided in the application of basic principles to the specific problems of the individual. All forms involved in individual tax returns are studied.

Prerequisite: 12 semester-hours of accounting

Credit: 2 semester-hours

BUSINESS EDUCATION 412. *Project Development in Consumer Education*

This course permits the students to explore in a specialized fashion two major areas of consumer education. Two projects are developed, one on housing and the other on the furnishings of a home. The basic purposes of this course are to illustrate the handling of material and the procedures that might be used in developing other consumer education units.

Prerequisite: A course in consumer education or economics

Credit: 2 semester-hours

BUSINESS EDUCATION 414. *Merchandising, I*

This course analyzes the problems of how, what, where and when to buy; terms of purchasing, tested receiving and marketing procedures; mathematics of merchandising—setting retail price, planning mark-up and mark-down; and inventory controls. It is designed to assist the teacher of the prospective or actual small businessman.

Credit: 2 semester-hours

BUSINESS EDUCATION 417. *Marketing*

The functions involved in the marketing process, the various channels of distribution, marketing institutions, and the costs of marketing are considered in this course. Such topics as auctions,

produce exchanges, wholesalers, retailing, department and mail-order stores, chain stores, cooperatives, profits and prices are included.

Credit: 2 semester-hours

BUSINESS EDUCATION 418. *Retail Store Management*

The work of the store manager in retail store operation is fully explored. The problems of organization and management as encountered in various types of retail stores are discussed. Consideration is given to trends, principles, and practices in small and large stores in both the independent and chain-store fields.

Credit: 2 semester-hours

BUSINESS EDUCATION 420. *Field Studies in Business Education*

This orientation course aims to introduce business-education students, through direct observational techniques, to the realities of the business world. Field trips are made in the New York Metropolitan Area which include visits to business organizations where the following types of business activity or relationships may be observed: production, merchandising and advertising; finance, transportation and communication; employer-employee relationships; government and business relationships. The field trips are supplemented by regular class sessions where seminar discussions are held and visual aids developed and used for the business education field.

Credit: 2 semester-hours

BUSINESS EDUCATION 421. *Finance and Investments for Families*

This course applies the principles of budgeting, banking, insurance, finance, and investments to the complicated problems facing individuals and families in these areas. It deals with budgets; savings; banking; life insurance; general insurance annuities; pensions; wills; such investments as stocks, bonds, and mutual funds; homes; and small business enterprises. This course is not open to students who have completed BUSINESS EDUCATION 409 unless they obtain special permission.

Credit: 2 semester-hours

DEPARTMENT OF EDUCATION

Graduate courses in this department meet one or more of three needs: (1) instruction in the Administration and Supervision major leading to the A.M. degree and New Jersey certification for one or more of the positions of Subject Supervisor, General Secondary Supervisor, and Secondary School Principal; (2) instruction in the Personnel and Guidance major leading to the A.M. degree and New Jersey certification in guidance; and (3) advanced professional instruction for administrators, supervisors, counselors, and classroom teachers.

In pursuit of the above objectives most graduate courses in the Education Department are designed for students with teaching experience. Other graduate courses presuppose at least a teaching certificate.

Graduate students who do not hold teaching certificates will enroll in undergraduate and senior-graduate (400 level) courses in order to meet certification requirements. Under special and unusual circumstances, uncertificated graduate students may also enroll, with the approval of the Chairman of the Education Department, in the following graduate courses in the Education Department: 500, 502, 505, 506, 507, 535, 560, 562.

Graduate students working toward an A.M. degree in Administration and Supervision are required to have at least two years of teaching experience before matriculation; those majoring in Personnel and Guidance are required to have at least one year of teaching experience before matriculation.

Students who plan to remain classroom teachers are not encouraged to seek an A.M. degree in either Administration and Supervision or Personnel and Guidance.

Courses in the teaching of elementary-school subjects are open only to regular Montclair State College undergraduates or to holders of the A.B. degree from the Montclair State College.

I. COURSE REQUIREMENTS FOR THE A.M. DEGREE IN ADMINISTRATION AND SUPERVISION

- A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience completed prior to matriculation. Not more than eight semester-hours of work taken prior to matriculation may be counted toward this degree.
- B. Graduates of New Jersey State Colleges and Rutgers, The State University, may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Program Adviser and the Chairman of the Graduate Council.

Graduates of other accredited colleges and universities may have this privilege if matriculated on or after April 12, 1962.

- C. Satisfactory completion of not fewer than thirty-two semester-hours of work as follows: (In exceptional cases appropriate substitutions or changes may be made in these requirements upon approval by the Program Adviser.)

1. Required Courses—20 semester-hours

	S. H.
Ed. 503. <i>Methods and Instruments of Research</i>	2
Ed. 510. <i>Introduction to Educational Administration</i>	2
Ed. 512. <i>School-Community Relations</i>	2
Ed. 514. <i>School Law</i>	2
or	
Ed. 516. <i>School Finance</i>	
Ed. 520. <i>Organization and Administration of the Modern H. S.</i>	2
Ed. 530. <i>Curriculum Construction in the Secondary School</i>	2
Ed. 535. <i>Organization and Administration of Extra-Curricular Activities</i>	2
Ed. 540. <i>Supervision in the Secondary School I</i>	2
Ed. 580. <i>Principles and Techniques of Guidance</i>	2
Ed. 603. <i>Principles and Practices of Research</i>	2

2. Education Department Electives (6 semester-hours)
The student, with his adviser's approval, will select six semester-hours in additional Education Department courses.
3. Electives in Other Departments (6 semester-hours)
The student, with his adviser's approval, will select six semester-hours of course work in other departments. It is intended that the electives chosen shall be of a liberal-cultural orientation selected to broaden the student's interests and background.
4. Candidates for the Master's degree in Administration and Supervision will be required to pass a comprehensive examination.

II. COURSE REQUIREMENTS FOR THE A.M. DEGREE IN PERSONNEL AND GUIDANCE

- A. Graduation from an accredited college or university, a New Jersey teacher's certificate, and two years of teaching experience. One year of this experience must be completed prior to matriculation. (Not more than eight semester-hours will be counted toward this degree prior to the obtaining of this certificate and the beginning of this experience.)
- B. Satisfactory completion of not fewer than 32 semester-hours as follows:

	S. H.
1. Basic Requirements	
Ed. 503. <i>Methods and Instruments of Research</i>	2
Ed. 567. <i>Educational and Psychological Measurements in Guidance</i>	2
Ed. 580. <i>Principles and Techniques of Guidance</i>	2

2. Select 4 s. h. from the following

Ed. 560. <i>Advanced Educational Psychology</i>	2
Ed. 561. <i>Child and Adolescent Development</i>	2
Ed. 562. <i>Principles of Mental Hygiene</i>	2
Ed. 564. <i>Psychology and Education of Exceptional Children</i> —Physical and Mental	2
Ed. 565. <i>Psychology and Education of Exceptional Children</i> —Social and Emotional	2
Ed. 566. <i>Psychology and Education of the Gifted</i>	2
Ed. 568. <i>Psychological Tests in Guidance Programs</i>	2
3. Select 10 s. h. from the following (Ed. 580 is a prerequisite for all of the following.)

Ed. 581. <i>Community Resources for Guidance</i>	2
Ed. 582. <i>Vocational Guidance</i>	2
Ed. 583. <i>Educational Guidance</i>	2
Ed. 584. <i>Social-Moral Guidance</i>	2
Ed. 585. <i>Group Guidance and Counseling Activities</i>	2
Ed. 586. <i>Elementary School Guidance Services</i>	2
Ed. 587. <i>Administration and Supervision of Guidance Programs</i>	2
Ed. 588. <i>Techniques of Interviewing and Counseling</i>	2
Ed. 589. <i>Student Personnel Services in Higher Education</i>	2
4. Select 4 s. h. from the following

Ed. 601D. <i>Workshop in Education—Guidance</i>	2-4
Ed. 604. <i>Field Work in Guidance</i>	2-4
Ed. 606. <i>Practicum in Guidance Services</i>	2-4
5. Free electives in any department of the college 8
6. Candidates for the Master's degree are required to pass a comprehensive examination or complete Ed. 603, *Principles and Practices of Research*. The credits earned in Ed. 603 will be included in area 5 above.
7. A candidate may choose to write a thesis providing he receives the approval of his adviser. Four semester-hours' credit will be granted for the completion of a thesis and the credits will be included in area 5 above.

Note: Deviation from the above program will be permitted only by permission in writing countersigned by the Chairman of the Graduate Committee and the student's Program Adviser.

Special Note: Math. 400 (*Educational Statistics*) or equivalent, is a prerequisite to Ed. 503 and does not bear graduate credit.

Graduates from New Jersey State Colleges and the State University may transfer not more than eight semester-hours of graduate work to be counted toward this degree upon approval by the Chairman of the Graduate Council. Graduates of other accredited colleges and universities may have this privilege if matriculated on or after April 12, 1962.

GRADUATE COURSES

NOTE: Previous course numbers are enclosed in parentheses. Students are not permitted to enroll in courses they have taken previously under other titles and/or other course numbers.

EDUCATION 500 (500C). *Recent Trends in Secondary School Methods*

This course emphasizes the fundamental principles underlying the technique of teaching on the secondary school level. Some of the topics considered are: organization of knowledge, the logical and psychological aspects of method, developing appreciations, social-moral education, teaching motor control, fixing motor responses, books and verbalism, meeting individual differences, guidance in study, tests and examinations, marks and marking.

Credit: 2 semester-hours

EDUCATION 501. *Tests and Measurements in Secondary Education*

The purpose of this course is to develop an appreciation of the meaning and importance of measurement in education, and to give a working knowledge of instruments of measurement.

Credit: 2 semester-hours

EDUCATION 502(553). *Teaching the Block of Time Curriculum in the Junior and Senior High School*

This course concerns the structure, organization and methods of teaching block of time curriculums in secondary schools, after a discussion of underlying philosophy and historical development.

Credit: 2 semester-hours

EDUCATION 503. *Methods and Instruments of Research*

This course is required of all regularly matriculated candidates for the Master's degree without regard to their field of major interest. Its purpose is to introduce students of education to research and its practical application to professional problems. The course treats: the nature and types of educational research; methods and techniques of educational research; and the tools used in interpreting statistical data. During the course, the student completes his outline and may complete his research either in this course, in EDUCATION 603, or in

his departmental seminar or research course. It is recommended that this course be taken rather early in the graduate program and must precede work in departmental seminar or research courses.

Prerequisite: MATHEMATICS 400, or equivalent

Credit: 2 semester-hours

EDUCATION 504(540). *Recreational and Activity Leadership*

It is the aim of the course to furnish each student with practical skills that are of service in dealing with young people of high school age. The practical side is supplemented by a thorough consideration of source material and theory. A partial list of the areas covered in the course follows: How to organize and handle groups, the use of leaders from within the group, indoor games, outdoor games, special hikes, outdoor cooking, camp-fire leadership. Special field trips are provided to observe camps and playgrounds in operation.

Credit: 2 semester-hours

EDUCATION 505(552). *The Two-Year College*

This course is designed to acquaint the student with the history, purposes, patterns, and trends of the two-year college, including the junior college, the community college, and university extension centers.

Credit: 2 semester-hours

EDUCATION 506 and 507. *Teaching in the Two-Year College: Part I and Part II*

These courses are designed to examine the instructional problems in public two-year colleges as they are affected by: the student population, the curriculum functions, the organization of the program, and the guidance responsibilities of the teacher. Field study visits to nearby two-year colleges are required.

Prerequisite: EDUCATION 505

Credit: 2 semester-hours each

EDUCATION 508. *Organization and Administration of the Public Two-Year College*

This course deals with the organization and internal administrative structure of the various types of public two-year colleges. Topics considered include: purposes of the two-year college, district organi-

zation, finance, the college board of trustees, relationships of the college president to the board and the district, functions and duties of the various college administrative officers, and the faculty's role in administration.

Credit: 2 semester-hours

EDUCATION 509(500A). *Basic Educational Concepts*

This course deals with a study of those concepts or principles which have gradually emerged from the mass of educational theory, practice, and research to a point where they have been generally validated and accepted. Such a study is intended as a summarization aimed at achieving a better perspective of the relationship of specific items to the total educational pattern.

Prerequisite: EDUCATION 510

Credit: 2 semester-hours

EDUCATION 510(500D). *Introduction to Educational Administration*

This is the basic course in the organization and administration of the American school system at the national, state, intermediate, and local levels. The purposes and nature of school administration are studied. Other topics surveyed include: the superintendency, personnel problems, records and reports, plant administration, business administration, auxiliary services, administration of curriculum, instruction, guidance, and pupil personnel.

Credit: 2 semester-hours

EDUCATION 511. *School Business Administration*

Topics considered in this course include: the role of business administration in public education, office management, budgetary procedures, financial accounting, payroll administration, purchase and supply problems, insurance, debt service management, transportation, and food service.

Prerequisite: EDUCATION 510 or equivalent

Credit: 2 semester-hours

EDUCATION 512(500F). *School Community Relations*

This course concerns the relation of the school to other educational efforts of the community. It considers the scope and types of agencies and informal influences of an educational nature, and also the agencies and methods by which the best total cooperative effort can be attained.

It deals also with methods and plans of publicity. Constant reference throughout is made to New Jersey localities.

Prerequisite: EDUCATION 510 or equivalent

Credit: 2 semester-hours

EDUCATION 514(506). *School Law*

After an introductory general study of such topics as: legal theory, the separation of school government from other local government, the appellate function of the State Commissioner of Education and the State Board of Education, the course is concerned principally with a study of New Jersey school laws (Title 18 of the Revised Statutes) and decisions. Students who have taken EDUCATION 500E, *School Administration II: Law and Finance*, for credit are not permitted to take either EDUCATION 514 or EDUCATION 516.

Credit: 2 semester-hours

EDUCATION 516(507). *School Finance*

After an introductory unit concerned with the current economic environment, this course is devoted to a study of state and local taxation, state school-aid theory and practice, school-district indebtedness, cost-quality relationships, Federal aid, fiscal controls, and the budgetary process. Students who have taken EDUCATION 500E, *School Administration II: Law and Finance*, for credit are not permitted to take either EDUCATION 514 or EDUCATION 516.

Prerequisite: EDUCATION 510 or equivalent

Credit: 2 semester-hours

EDUCATION 519. *Seminar in Educational Administration*

This is an advanced course, taught by the case and other methods in which complex problems of education are considered.

Prerequisites: EDUCATION 510, 512, 520, 540, 580, and permission of the instructor

Credit: 2 semester-hours

EDUCATION 520(502). *Organization and Administration of the Modern High School*

The following topics are considered: the student personnel, building and revising the high school curriculum, providing for individual

differences, making the school schedule, records, the guidance program, pupil participation in government, the extra-curricular program, the health program, the safety program, discipline, library and study hall, cafeteria, the principal's office, and evaluating results.

Prerequisite: EDUCATION 510 or equivalent

Credit: 2 semester-hours

EDUCATION 525(509). *Secondary School Building Planning*

This course deals with the education planning of secondary-school buildings. The preparation of educational specifications and space requirements is considered. Topics considered include the planning of offices, classrooms, auditoriums, gymnasiums, laboratories, shops, libraries, cafeterias, and other spaces.

Prerequisites: EDUCATION 520 and EDUCATION 530 or equivalents

Credit: 2 semester-hours

EDUCATION 529(510). *Seminar in Secondary School Administration and Supervision*

In this course the class makes an intensive study of administrative and supervisory problems suggested by the educational events and trends of the year, by the interests and responsibilities of the members of the class, and by educational movements in New Jersey and the country. Each student does an individual piece of research which he reports to the class. This represents advanced work which depends upon previous study or experience in educational administration or supervision.

Prerequisites: EDUCATION 503, 520 and 540 or equivalents

Credit: 2 semester-hours

EDUCATION 530(504A). *Curriculum Construction in the Secondary School*

The purpose of this course is to consider the extent to which the secondary school curriculum meets the needs of a changing civilization, and to consider effective means of curriculum construction.

Prerequisite: EDUCATION 510 or equivalent

Credit: 2 semester-hours

EDUCATION 535(505). *Organization and Administration of Extra-Curricular Activities*

The first part of this course considers such general problems of extra-curricular activities as: their growing importance; their relation to the curriculum; the principles underlying their organization, administration, and supervision; and methods of financing. In the second part, an intensive study is made of the home room, the assembly, the student council, clubs, athletics, school publications, and other activities in which the class is especially interested.

Credit: 2 semester-hours

EDUCATION 538(548). *Curriculum Construction in the Elementary School*

This course offers an opportunity to review state and city elementary curricula: to discuss the principles of curriculum construction; to collect new teaching materials for the various subjects; and to evaluate, organize, and grade these materials. Teaching procedures in the use of materials are discussed and evaluated in terms of pupil needs, the objectives set up, and the results obtained. This course offers an opportunity to make a special study of the materials and procedures to be used in the supervision of the language arts.

Credit: 2 semester-hours

EDUCATION 539(504B). *Seminar in Curriculum Organization*

This course is for students actively engaged in problems of curriculum reconstruction and those who are anticipating committee work in this field. It concerns both the elementary and secondary levels. This represents advanced work which depends on previous study in the curriculum area.

Prerequisite: EDUCATION 503, 530, or 538

Credit: 2 semester-hours

EDUCATION 540 and 541(508). *Supervision in the Secondary School, Part I and Part II*

These courses emphasize the more practical phases of supervision which are met most frequently by those engaged in it. Among the topics are: organization for adequate supervision, supervision as encouraging and guiding the growth of teachers and the improvement of educational procedures, the supervisory functions of teachers' meetings, discussion groups, general and professional reading, the writing

of articles, cooperative curriculum modification, utilization of community resources, and teacher intervisitation.

Credit: 2 semester-hours each

EDUCATION 550(Eng. 547). *Guiding the Reading Interests of Secondary School Students: Part I. Materials and Sources*

EDUCATION 551. *Guiding the Reading Interests of Secondary School Students: Part II. Needs and Services*

The purpose of these courses is to prepare teachers to discover and improve the reading interests and attitudes of their students. Useful to all content area teachers and specialists who assign recreational and research reading, Part I particularly deals with fundamental bibliographical tools, the classroom teacher's relationship to the library, current source materials in book evaluation, and techniques for determining book selection. In Part II the teachers write their own book annotations and reviews, establish readability and suitability criteria based on a growing knowledge of child development, help build collections and services for young people which meet their personal needs through reading.

(EDUCATION 550 not open to those who have taken ENGLISH 547; EDUCATION 551 may be taken as Part II after ENGLISH 547.)

Credit: 2 semester-hours each

EDUCATION 552(556). *Principles of Reading Improvement in the Secondary School*

This is a course planned to present a deeper picture of the guiding principles and controversial issues which influence the teaching and learning of reading. Organized especially for the subject area teacher and the beginning reading specialist, recent non-clinical research and important professional and lay journals are studied to explore the pendulum of theory and practice in: the organization and administration of developmental reading programs, educational policies which affect reading, child development concepts and reading growth, systematic differentiation of individual needs, and reappraisal of the place of reading in our changing society. (Not open to those who have taken EDUCATION 556.)

Credit: 2 semester-hours

EDUCATION 553(430, 557). *Techniques of Reading Improvement in the Secondary School*

This is a practical course dealing with popular techniques useful in the improvement of non-clinical reading difficulties found in the content subjects. Planned especially for the subject area teacher and the beginning reading specialist, a study is made of secondary school reading needs, and specific suggestions are outlined for guiding the slow, average, and gifted student to success in reading up to his capacity in a classroom situation. Through an actual study of the more widely used reading workbooks, films, slides, tachistoscopic instruments, and texts available in the Reading Laboratory facilities, a practical approach is made to building a repertoire of reading skills in many areas.

(Not open to those who have taken EDUCATION 430 and EDUCATION 557.)

Credit: 2 semester-hours

EDUCATION 554 (ENGLISH 430). *Case Studies of Reading Difficulties: Part I. Testing*

EDUCATION 555. *Case Studies of Reading Difficulties: Part II. Reporting*

These are the basic courses in learning to use diagnostic materials and learning to write up diagnostic findings. In Part I, after making a thorough study of the most frequently used current test instruments and inventories, each teacher applies this knowledge to the actual testing of a child with reading problems. Particular attention is given to the unique values of group and individual tests, survey and diagnostic tests, and standardized and informal tests. In Part II the class learns to interpret test data. Practice in case reporting to parents, schools, and agencies is undertaken.

(EDUCATION 554 not open to those who have taken ENGLISH 430; EDUCATION 555 may be taken as Part II after ENGLISH 430.)

Credit: 2 semester-hours each

EDUCATION 556N(530A, 558). *Corrective and Remedial Reading: Part I. Causation*

EDUCATION 557N(530B, 558). *Corrective and Remedial Reading: Part II. Treatment*

These are causation and treatment courses planned for the teacher and specialist who are involved in some aspect of remedial instruction

in reading improvement. Part I offers an opportunity to extend training by investigation and interpretation of the more serious reading problems. A study is made of the constellation of causes of reading difficulties and techniques of remedial and corrective treatment are projected. In Part II particular attention is paid to the selection and adaptation of suitable improvement devices and curriculum materials. Illustrative cases are drawn from actual clinical experiences by requiring participation in the program of the Reading Laboratory.

(EDUCATION 556N not open to those who have taken EDUCATION 530A and EDUCATION 558; EDUCATION 557N not open to those who have taken EDUCATION 530B and EDUCATION 559.)

Prerequisite: Permission is needed to take these courses

Credit: 2 semester-hours each

EDUCATION 560(500B). *Advanced Educational Psychology.*

The course covers the various aspects of growth. Individual differences, their measurement, and their bearing on educational practices and principles furnish topics of study and discussion. Principles and laws of learning are reviewed. Some time is given to problems of personality as encountered in school work. The several points of view which have been prominent in the psychology of the past fifty to seventy-five years are examined for their contributions to thinking about human nature.

Prerequisite: An introductory course in psychology

Credit: 2 semester-hours

EDUCATION 561(550). *Child and Adolescent Development*

This course reviews the general characteristics of child and adolescent development: motor and physiological, social, emotional, language, intellectual, and interests and ideals. The influences of home, school, community, and institutional life on child and adolescent development are considered as well as problems of guidance presented by children in the normal course of development and also those presented by deviations from the normal course.

Credit: 2 semester-hours

EDUCATION 562(520). *Principles of Mental Hygiene*

This course is designed to be a general survey of the principles and practices of mental health with special reference to the mental

health of teacher and pupil. It involves a thorough grounding in fundamental principles of mental hygiene with much practical consideration of the mental health values of instructional programs and procedures. Discussion centers on practical efforts to develop wholesome personalities in our schools.

Credit: 2 semester-hours

EDUCATION 564(554A). *Psychology and Education of Exceptional Children: Physical and Mental*

This course surveys current practices and problems in the education of children with physical and mental handicaps, and of gifted children. It is designed for teachers, counselors, supervisors, and administrators who may work with one or more such children or who may wish to prepare for school and community leadership in developing facilities for exceptional children.

Prerequisite: A course in child and adolescent psychology

Credit: 2 semester-hours

EDUCATION 565(554B). *Psychology and Education of Exceptional Children: Social and Emotional*

This course surveys current practices and problems in the education of socially and emotionally handicapped children. It is designed for teachers, counselors, supervisors, and administrators who may work with one or more such children or who may wish to prepare for school and community leadership in developing facilities for exceptional children.

Prerequisite: A course in child and adolescent psychology

Credit: 2 semester-hours

EDUCATION 566. *Psychology and Education of the Gifted*

This course is designed to present a complete picture of the bright and gifted young people in contemporary American life. It surveys the various practices involved in their education, as well as the psychological characteristics of this group and socio-emotional development. It is designed for teachers, counselors and administrators, and is conducted on an advanced level, allowing sufficient time for seminar discussions in addition to lectures.

Credit: 2 semester-hours

EDUCATION 567(521A). *Educational and Psychological Measurement in Guidance*

This course deals with fundamentals of educational and psychological measurements in guidance: test theory, statistical concepts, test construction, evaluation, and interpretation. The place of tests in the instructional program is stressed.

Prerequisite: This course is open only to those with teaching experience

Credit: 2 semester-hours

EDUCATION 568(521B). *Psychological Tests in Guidance Programs*

This course is designed to familiarize the student with various psychological tests and scales that may be used in guidance programs in the secondary school. The student is given practice in administering many types of group tests. This includes scoring the tests and evaluating the results, with a discussion of ways in which these results may be used. Much time is spent in actual laboratory demonstrations of tests, giving students an opportunity to serve as subjects and as examiners. Class discussion is based upon first-hand information gained through use of the tests, on readings, and on class reports.

Prerequisite: EDUCATION 567(521A)

Credit: 2 semester-hours

EDUCATION 573(560A). *Production of Audio-Visual Instructional Materials:*
and
Part I, Non-Projected Materials

EDUCATION 574(560B). *Production of Audio-Visual Instructional Materials:*
Part II, Projected and Audio Materials

These two courses combine laboratory and seminar experiences in the organization and preparation of instructional materials for classroom use. They are intended for teachers, administrators, and audio-visual specialists who wish to develop ability to plan and produce audio-visual materials for instructional purposes. Students have opportunities to prepare pictures, slides, transparencies, displays, models, graphs, magnetic tapes, motion picture segments, and instructional television programs according to their interests and needs.

Part I deals with non-projected materials, such as drawings, charts and graphs, bulletin boards, feltboards, maps, demonstrations, exhibits and displays, dioramas, etc.

Part II includes production of projected and audio materials, such as slides, filmstrips, opaques, transparencies, magnetic tapes, motion pictures, television programs, etc.

These courses meet for three clock hours per week, since they involve primarily laboratory experiences.

Prerequisite: EDUCATION 408. *Selection and Utilization of Audio-Visual Materials*

Credit: 2 semester-hours each

EDUCATION 580(551). *Principles and Techniques of Guidance*

Topics included in this course cover : philosophy of guidance, history of the guidance movement, the need for guidance presented by children and adolescents. The methods of gathering useful data are studied, and school records, exploratory activities, tests, inventories, the case study approach, occupational information, and occupational data are treated as well as general methods of guidance with special stress on interviewing and counseling of students.

Credit: 2 semester-hours

EDUCATION 581(534). *Community Resources for Guidance*

This course deals with the various agencies, industries, and institutions available in the surrounding communities for use in guiding students. In addition to becoming familiar with the location and nature of these facilities students learn the techniques for arranging student interviews and visits. Class discussion and personal research are supplemented by field trips.

Prerequisite: EDUCATION 580

Credit: 2 semester-hours

EDUCATION 582(535). *Vocational Guidance*

This course is intended for counselors in the junior and senior high schools to obtain information about the principles and philosophy of vocational education and the techniques of counseling youths who wish to receive pre-employment training, and for counselors of out-of-school groups who are attempting to make readjustments to occupational life. Attention is also given to guidance techniques for job preparation and readjustment, the matching of educational and personal abilities to job specifications, the effects of social legislation on the employment of youths, and a study of techniques used in determining occupational needs and occupational changes.

Prerequisite: EDUCATION 580

Credit: 2 semester-hours

EDUCATION 583(536). *Educational Guidance*

This course is concerned with the facilities available for education after high-school graduation, the problem of further training for pupils leaving school before completing high school, and the academic problems of students while in school. A brief survey of colleges and college-admission procedures is made.

Prerequisite: EDUCATION 580

Credit: 2 semester-hours

EDUCATION 584(537). *Social-Moral Guidance*

This course is concerned with the non-vocational and non-academic personal and social problems of pupils as well as with the development of techniques by which counselors can integrate the pupil's personal life with the mores and customs of society. It also includes a study of the possible services of various community agencies and a study of the counselor's relation to problems of discipline and citizenship education.

Prerequisite: EDUCATION 580

Credit: 2 semester-hours

EDUCATION 585(538). *Group Guidance and Counseling Activities*

This course is concerned with the various techniques for helping individual pupils and for using group activities including role-playing as a guidance technique. The group activities considered include those of home rooms, activity periods, occupation courses, student field trips, placement follow-ups, college nights, and career days.

Prerequisite: EDUCATION 580

Credit: 2 semester-hours

EDUCATION 586(539). *Elementary School Guidance Services*

This course is designed for guidance counselors in the public schools with particular emphasis on the guidance services that may be offered in grades kindergarten through six. The guidance program, as established in the public schools, envisions supervision and administration of the guidance program from the kindergarten through graduation at grade twelve. It is important, therefore, that the guidance director understands the services that can be made available to the elementary school.

Prerequisite: EDUCATION 580

Credit: 2 semester-hours

EDUCATION 587. *Administration and Supervision of Guidance Programs*

This course is designed to acquaint the student with more complex aspects of the supervision and administration of a guidance program. It includes such topics as: developing and administering programs of student registration (course selection); theory and techniques of scheduling a modern high school; supervisory responsibilities of the director of guidance within and outside of the department; coordinating guidance activities in a multi-school district, etc. In general, this course is aimed at providing essential background for counselors desiring to establish or administer a guidance program in a high school or a multi-school system.

The primary method of study is the examination and evaluation of current guidance practices leading to the formation of proposals for improvement, and possible inclusion, in guidance programs where the student is working as a counselor and/or a director.

Prerequisites: EDUCATION 580 and 6 semester-hours credit in Area 3 of the Personnel and Guidance Master's degree program

Credit: 2 semester-hours

EDUCATION 588. *Techniques of Interviewing and Counseling*

This is an advanced techniques course in the counseling of individual students. The directive, non-directive, client-centered, and role playing approaches, as well as the case study methods are studied. Opportunity for demonstration and practice with these techniques are implemented with tape recordings, one way screens, and closed-circuit television.

Prerequisites: Twelve semester-hours of work in the Personnel and Guidance graduate program and permission of the faculty adviser

Credit: 2 semester-hours

EDUCATION 589. *Student Personnel Services in Higher Education*

This course is a study of the student personnel functions in two-year and four-year colleges. The areas to be included are: personal counseling, financial aid, dormitory management, health program, student activities and social programs; course selection, job placement, college admission and academic retention, administration and supervision of the program.

Credit: 2 semester-hours

EDUCATION 601. *Workshop in Education**Section A—Administration**Section B—Supervision**Section C—Curriculum**Section D—Guidance**Section E—Psychology*

The workshop course enables the graduate student to devote his time to an educational topic or school problem of current interest to him and to secure the help of the staff, fellow students, and college facilities in pursuing this study. Members of the workshop may meet together to discuss matters of common concern in respect to the current school situation. In addition, the student works independently on his own subject and at times meets with a small group interested in the same area.

In the past, students have worked on topics in such areas as these: problems in administration, guidance programs, extra-curricular activities, school philosophies, problems in supervision, curriculum planning, and community relations. The success of the workshop depends much upon the student knowing what he wants to accomplish in six weeks, the procedure being flexible enough to support his purposes. He must have his proposed problems for study approved by the Director of the Workshop before he enrolls for the course.

The workshop is offered only in the summer session. It is divided into five sections, as noted above. The student may enroll for four semester-hours of credit or for two, the four calling for two periods of scheduled time in the course daily, the two calling for one period of scheduled time in the course. The student taking the course for two credits enrolls for one of the five fields. The student taking it for four credits may do all the work in one of these five fields, or he may enroll for two hours of credit in one and two in another.

Credit: 2 or 4 semester-hours

EDUCATION 602. *Research Seminar in Guidance*

This course is designed to provide a laboratory situation for the exploration and study of the present practices with respect to the three major phases of the guidance program. Usually this seminar is given in conjunction with either Vocational (EDUCATION 582), Educational (EDUCATION 583), or Social-Moral (EDUCATION 584) Guidance. The major portion of the time is spent on field trips, in private investigation, and in research.

Prerequisites: EDUCATION 580, and previously or concurrently the related courses listed above

Credit: 4 semester-hours

EDUCATION 603(603B). *Principles and Practices of Research*

The purpose of this course is to give students an opportunity to complete research begun in EDUCATION 503; to collect, analyze, and interpret the data; to state the findings; to draw conclusions and generalizations; to write the research report together with an abstract; to give an oral report of the investigation before a committee of the faculty.

Prerequisite: EDUCATION 503

Credit: 2 semester-hours

EDUCATION 604(529). *Field Work in Guidance*

The aim of the course is to introduce the student to various aspects of guidance through experience in agencies actually dealing with such problems. Students observe and participate in activities of the agencies to which they are assigned and write full accounts of these observations and experiences. Some time is spent in discussing and evaluating these experiences and relating them to the literature of the subject. Prerequisites are: experience in teaching, familiarity with the literature on all aspects of guidance and mental hygiene, and EDUCATION 560, 562, and 580. This work is conducted by seminar and individual guidance. The hours for the conferences are arranged personally by student and instructor.

Credit: 4 semester-hours

EDUCATION 606. *Practicum in Guidance Services*

This course is designed to be a final summation of the counselor's preparation. It includes: investigation of programs in practice; development of guidance programs to meet specific school needs; evaluation of student personnel services.

Prerequisite: Completion of a minimum of 20 semester-hours in the Personnel and Guidance program

Credit: 2 or 4 semester-hours

SENIOR-GRADUATE COURSES

Most of the following courses are set up to serve graduate students as well as College seniors. To carry graduate credit, the course in question must be approved by the candidate's adviser. In all instances, EDUCATION 406, EDUCATION 409, and EDUCATION 410 will be accepted as work for either of the two graduate degrees in this department.

EDUCATION 401. *The Development of Educational Thought*

The purpose of this course is to study the major philosophical traditions and their educational implications in order to assist the student to develop his own philosophy of education. These philosophical traditions are studied in their historical and contemporary perspectives through texts and supplementary readings.

Credit: 3 semester-hours

EDUCATION 404. *Cocurricular Activities in the Secondary School*

This course is designed as an introduction to that part of the total school program falling outside of the area of regularly scheduled classes. A study is made of the role of the faculty advisor. The more usual cocurricular activities are considered.

Credit: 3 semester-hours

EDUCATION 405. *Teaching the Block-of-Time Program in the Secondary School*

Following a study of the philosophical and psychological bases of the block-of-time program, major emphasis is placed on the methodological problems involved in teaching the program and the development of resource units for use at different levels.

This course is open only to those students who have a major-minor combination of English and social studies.

Credit: 3 semester-hours

EDUCATION 406. *Educational Sociology*

This course deals with the application of sociological principles to educational problems. The school is treated as a part of the community, and the various social forces that affect the school and its administration are considered. The following topics are included:

family backgrounds, community organization, social breakdown, social mobility, socialized classroom methods, and the social approach to individual behavior difficulties.

Credit: 3 semester-hours

EDUCATION 407A. *Television in Education Workshop: Programming and Production*

This is a laboratory course designed to develop the techniques, methods, standards, procedures, and criteria pertaining to the special place of television in education. Through the utilization of studio equipment together with the resources of all the academic departments of the college, student potentialities, campus life, and the community, students receive experience in planning, developing, and producing, television programs of educational value. Actual training is given in the use of standard television equipment on campus, and field trips are made to local television laboratories and studios.

Credit: 2 semester-hours

EDUCATION 407B. *Television in Education Workshop: Classroom Utilization*

This course is designed to give training in the following areas of television education: types of programs best suited for classroom use; practical applications of programs emanating from commercial stations; various subject areas in which television might be used such as language, science, art, social studies, etc.; script writing; coordination of program and school schedules; and the possible use of educational television stations and how they can best serve surrounding communities. Students are also introduced to the operation of both sending and receiving television equipment so that they may understand program possibilities and limitations.

Credit: 2 semester-hours

EDUCATION 408. *Selection and Utilization of Audio-Visual Materials*

Sources, selection, and evaluation of audio-visual aids are studied in this course. Techniques in developing individual reference catalogs of audio-visual aids are stressed. The production of school-made aids is also an important aspect of the course. The use of the latest audio-visual equipment is demonstrated.

Credit: 2 semester-hours

EDUCATION 409. *Radio and Sound Equipment in the Classroom*

This course trains teachers and school executives in the use of radio programs, amplifying systems, recording equipment, and record

players. Actual practice is given in the use of these educational aids. Problems of script-writing, microphone and recording techniques, and program directing are considered. The class visits radio stations for equipment and program observation. Each student develops a teaching unit using radio or sound equipment to vary, vitalize, and improve educational practices.

Credit: 2 semester-hours

EDUCATION 410. *Teaching Materials Workshop*

This course is for those persons who wish to study advance problems in the utilization and administration of audio-visual materials. Individual research is stressed, and there is an opportunity to work out individual projects. Such problems as budget requirements, administrative set-up, establishment of film libraries, etc., are emphasized. It is assumed that the student will have taken EDUCATION 408 or will have had the equivalent in practical experiences.

Credit: 2 semester-hours

EDUCATION 411. *Educational Motion-Picture Workshop*

This course includes various phases of the planning and production of educational motion pictures. Students receive actual experience in scenario writing, costume research, set designing, lighting, photography, editing, and sound recording. During the course an educational film is produced as a class project.

Credit: 2 semester-hours

EDUCATION 415. *Seminar in the Problems of a Classroom Teacher*

This seminar deals with the problems commonly encountered by beginning teachers. It considers problems of classroom management, student behavior, teaching methods, teaching materials, curriculum adaptations, and the relation of the teacher to the total school community. It provides each student with an opportunity to analyze, evaluate and discuss student-teaching experiences. It makes provision for planning the student's approaching employment as a teacher.

Credit: 3 semester-hours

EDUCATION 420A and 420B. *The Community Centered School*

This course deals with the development and functions of the school as a community resource. Students assemble and interpret data relating to actual school and neighborhood situations. Consideration

is given to the social framework in which the school operates; racial and national minorities; intercultural education; truancy and delinquency; and the discovery and utilization of community resources. The use of school personnel and facilities to deal with racial problems is treated in light of the data assembled.

Credit: 2 semester-hours each

EDUCATION 421A and 421B. *Leadership of Activities and Services in Community Education*

This course is designed to prepare teachers and others to give leadership to community-education activities. Starting with the assumption that the school should serve as a community center, members of the course proceed to learn about the various activities and programs that can be initiated and carried on by the school. Consideration is given to programming, utilization of space and personnel, and care of equipment. Techniques for organizing and directing special programs such as scouting, folk dancing, crafts, field trips, production of films, forums and debates, etc., are included.

Credit: 2 semester-hours each

EDUCATION 422A and 422B. *The Organization, Administration, and Supervision of Programs in Community Education*

This is a workshop type of course which emphasizes the integration of school, social, recreation, and adult education programs. The course presents a survey of current trends in community education as adopted and implemented by boards of education throughout the country. Principles, policies, practices, and problems related to the administration and supervision of community-education programs are surveyed. The following types of programs are considered: summer playgrounds, day camps, after-school centers, evening centers, youth and adult recreation centers.

Credit: 2 semester-hours each

EDUCATION 440. *Camping and Outdoor Education*

The purpose of this course is to familiarize the students with camping and outdoor education as educational methods utilized by the schools of America. The aims and methods of camping are studied, and consideration is given to the communities that have active camping and outdoor education programs in operation. The course also helps prepare the student for a position in summer camps. This course

is usually given at the New Jersey State School of Conservation, Stokes State Forest.

Credit: 2 semester-hours

EDUCATION 441. *Conservation Education*

This course is designed to give teachers and prospective teachers a background for organizing and teaching conservation on various grade levels. The need for conservation, the various kinds of natural resources, and some of the modern methods for using and renewing these resources are considered. Field trips, laboratory experiences, visual aids, printed materials, and visiting specialists combine to make this a useful introductory course for all teachers.

Credit: 2 semester-hours

EDUCATION 442. *Practicum in Camp Leadership*

In this course the student has an opportunity to learn the techniques of camp leadership through practical experience, guided group study, and discussion. The practical experience comes through serving as a camp counselor in an actual camp situation. During this practical experience there are regular discussion sessions and assigned readings which help the student to gain a background of knowledge to help deal with the practical problems as they arise.

Credit: 2 semester-hours

EDUCATION 444. *Practicum in Conservation Education*

This course is designed to provide teachers and supervisors with a background of experience and knowledge which will enable them to organize and to conduct conservation education programs in their own communities. Using an extensive library of conservation educational material, students formulate teaching units, lists of teaching aids, and projects suitable for use in their own communities. Participating in conservation projects with the children in the demonstration camp furnishes a practical background for research and discussion.

Prerequisite: EDUCATION 441, *Conservation Education*, or SCIENCE 412, *Field Studies in Science: Biological*, or SCIENCE 413, *Field Studies in Science: Physical*, or the equivalent

Credit: 2 semester-hours

EDUCATION 450. *Psychological Foundations of Personality*

This course is concerned with the physical, mental, and cultural factors influencing personality development. Such topics as the nature of personality, mental health and patterns of deviation, and evaluation are considered.

Credit: 3 semester-hours

EDUCATION 451. *Guidance for the Classroom Teacher*

This course is designed as an introduction to the field of guidance for teachers who are concerned with problems of guidance and human relations in the classroom. This course is also designed to give the new teacher a picture of the place of guidance in the modern school, to indicate what guidance is and what it is not, to indicate the techniques by which guidance is accomplished, and to identify some of the tools of the guidance counselor.

Credit: 3 semester-hours

EDUCATION 452. *Psychology and Education of the Handicapped*

This course is for the preparation of teachers of handicapped children and youth. It orients prospective teachers of regular classes to the special needs of those with handicaps of sensory, motor, intellectual, emotional, and neurological origins. Both the theoretical psychological aspects and the practical applications to the classroom are studied. The course includes analysis of case material.

Credit: 3 semester-hours

EDUCATION 453. *Social Psychology*

This course focuses on the social behavior of the individual and the group. Attention is given to social perception, motivation, and learning; attitudes and values; the development and dynamics of social groups; intergroup tension and prejudice; and psychological approaches to public issues.

Credit: 3 semester-hours

EDUCATION 461. *The Junior High School Curriculum*

Recent trends in the development of the junior high school curriculum and the relation of the curriculum to the aims, function, and organization of the junior high school are covered. Curriculum patterns in representative junior high schools are studied and evaluated. An opportunity is given to each student to develop units of work for junior high school subjects in the major of his choice.

Credit: 3 semester-hours

EDUCATION 462. *Survey of Reading Methods in Secondary School Subjects*

Planned especially for the inexperienced teacher in all subject matter areas, this introductory course outlines the role good reading plays in achieving both academic and personal success in every aspect of school life. New teachers will want an overview of: the physiological, psychological, and sociological factors in reading; resources available to the reading-minded teacher; and the school's responsibility for helping the student build an inventory of reading skills by utilizing reading opportunities in the entire curriculum.

Credit: 3 semester-hours

EDUCATION 463. *Reading and the Improvement of Study Skills*

This is a course in "How to Study" designed to prepare teachers to help junior-senior high school students to achieve greater effectiveness in their reading-study habits. After examination of recent materials and research, the class develops a series of practical methods for teaching and learning: the SQ3R approach, the best methods for taking examinations, the application of reading to problem solving, the development of memory and concentration, and the various techniques for taking and organizing reading notes, and the reading of homework assignments. (Not open to those who have taken EDUCATION 530C).

Credit: 3 semester-hours

EDUCATION 464. *Foundations of Reading Instruction*

Good first teaching of reading is of primary importance in the sequential development of reading skills which extend into the junior and senior high school. In this course methods and materials currently in use in elementary reading programs are studied with a view toward increasing the power of both the teacher and the learner. How the reading process begins, and how it is reinforced are topics fundamental to all upper grade teachers who are faced with the problem of continuing reading skills development in all curriculum areas. (Not open to those who have taken EDUCATION 532).

Credit: 3 semester-hours

EDUCATION 465. *College Reading and Study Improvement Laboratory*

This workshop course is designed for those college students who feel that reading-study problems are interfering with their normal

school progress. Students engage in supervised practice experiences which promote vocabulary growth, more flexible reading speeds, comprehension and recall improvement, skimming competency, and better interpretative and critical reading techniques. Particular attention is given to reviewing for examinations, keeping up with daily reading assignments, taking notes, and organizing the reading content into main and sub-topic structure. Students may volunteer for this course or be recommended by a faculty member.

Credit: 3 semester-hours

EDUCATION 480. *Field Science for Elementary Teachers*

Working in a natural setting, rather than an artificial laboratory, this course stresses firsthand experience with natural phenomena and suggests what can be done to convey an understanding of these things to the elementary school student. In developing an understanding of natural resources consideration is given to such areas as rocks and minerals, plant and animal life, astronomy, weather, and all outdoor phenomena, both physical and biological. If desired, collections are made under supervision, and some latitude is provided for individual specialization in some phase of field science. The student needs no formal scientific background for this course. Methods of teaching on the elementary school level as well as subject-matter content are included. Simple demonstrations, experiments, collections, acquisition of free and inexpensive materials, reference publications, and the most recent methods and trends in field trip procedure are considered.

Credit: 2 semester-hours

EDUCATION 491. *Measurement and Evaluation in Teaching and Learning*

This introductory course deals with teacher-made tests, standardized tests, and other devices for measuring and evaluating achievement, intelligence, aptitudes, social relationships, and personal-social adjustment. Instruction and practice are given in diagnosing disabilities in subject-matter areas and in appraising, marking, and reporting pupil progress. The student constructs, uses, and evaluates teacher-made tests, selects and administers standardized tests, handles test scores, and interprets test data.

Credit: 3 semester-hours

EDUCATION 492. *Comparative Education*

The educational systems of Europe, Asia, Africa, and Latin America are studied in an attempt to gain insight into the essential qualities of

American education. In this process the relationship between the educational system of each culture and its history, economy, and political and social organization should emerge. Factors causing progress and change in education since 1900 are observed.

Credit: 3 semester-hours

THE DEPARTMENT OF ENGLISH

Graduate study in the Department of English is designed:

1. To broaden the understanding and appreciation of the culture of the Western World through extended study of the literature of Great Britain and the United States, of those European nations which have contributed much to our American heritage, and of those Oriental nations now exerting an increasing influence upon the modern world.
2. To examine the function of English language communication in the modern world through study of its historical development, its psychological nature, its critical expression, and its practice in the language arts.
3. To enrich the professional background of English teachers through investigation of research and experimentation designed to improve instruction in English in the secondary school.

Requirements for Graduate Study in the English Department

The candidate for the Master's degree must present an undergraduate major of at least twenty-four semester-hours in English or complete the required number with prerequisite courses prescribed by the Chairman of the Department before matriculation.

Upon matriculation each candidate receives from the Chairman of the Department an approved course outline distributed as follows:

A. Basic Professional Education 6 semester-hours

These courses include a full year of research as prescribed in EDUCATION 503 and EDUCATION 603 or the equivalent of EDUCATION 603 in a departmental seminar such as ENGLISH 507, 516, 517, 519, or 541.

B. Departmental Course Requirements

I. American Literature Minimum requirements 4 semester-hours

To be selected from among ENGLISH 406, 407, 443, 525, 533, 537, 538, 543, 545A, 545B.

II. English Literature Minimum requirements 6 semester-hours

To be selected from among ENGLISH 402, 404, 406, 407, 420, 421, 443, 502, 503, 505, 506, 515, 518, 521, 531, 532, 535, 544A, 544B.

III. World Literature Minimum requirements
4 semester-hours

To be selected from among ENGLISH 432, 451, 452, 513, 514, 520A, 520B, 528, 530, 534, 536, 539, or 548.

IV. Language Communication Minimum requirements
4 semester-hours

a. Language Study

To be selected from among ENGLISH 408, 419, 511, 512, or 516.

*b. Reading Improvement

To be selected from among EDUCATION 556, 557, 558, 559.

*c. Speech

To be selected from among SPEECH 410, 435, 448, 449, 454, 456, 457, 461A, 461B, 462, 463, 464, 466, 467, 468, or 522.

C. *Electives* 8 semester-hours

In meeting this requirement the Department urges candidates for the Master's degree to explore the offerings in other departments and select as widely as possible in those areas not represented in undergraduate study. Such electives help the candidate to achieve the first purpose of graduate study in the Department, "to broaden appreciation of the culture of the Western World."

TOTAL SEMESTER-HOURS REQUIRED FOR THE A.M. DEGREE
IN ENGLISH 32

D. *Department Examination or Master's Thesis*

If a candidate begins a project in English in EDUCATION 503 and requires more time to complete it but cannot complete it in EDUCATION 603, he may, upon consulting the Chairman of the Department, complete the project in one of the following English Courses: 507, 516, 517, 519, depending upon their being offered.

If a candidate with an outstanding record wishes to evolve a research project in English developed in EDUCATION 503 and 603 into a thesis, a departmental sponsor will be appointed. The "Regulations of Research and Thesis Requirements" will be followed in the completion and acceptance of the thesis.

* A course in reading improvement or speech may be offered as two of the semester-hours required in the area of language communication.

Otherwise, each candidate must pass a written comprehensive examination before the degree is awarded. A part of this examination is a brief oral examination conducted by members of the Graduate Faculty of the Department. The Chairman of the Department announces to the Registrar as well as to members of the Department the date of the examination which will be given in April of each calendar year and will provide candidates with the information desired to prepare for it.

GRADUATE COURSES

ENGLISH 502. *Victorian Poetry*

The most important English poets who wrote during the transition from the Victorian to the modern period are read and discussed. An important feature of the course is the analysis and appreciative reading of the lyric poetry of Rossetti, Swinburne, Hardy, Bridges, G. M. Hopkins, Francis Thompson, A. E. Housman, Kipling, and W. B. Yeats.

Credit: 2 semester-hours

ENGLISH 503. *Geoffrey Chaucer and His Times*

Some of the works of Chaucer are read rapidly, others studied intensively, so that the students may acquire a broad general understanding of Chaucer's place in the history of English literature as well as facility in reading and interpreting the medieval text of his stories.

Credit: 2 semester-hours

ENGLISH 505. *Philosophy and British Poetry of the Nineteenth Century*

This course is designed to show the mutual interrelations between currents of philosophic thinking and their influence in selected writings of major poets from Wordsworth to Matthew Arnold.

Credit: 2 semester-hours

ENGLISH 506. *John Milton*

This course has for its primary aim the understanding and evaluation of Milton's poetry. Contributory to this aim are the following topics: Milton's literary heritage and influence; his leading position in the Puritan struggle for civil and religious liberty as revealed in the prose writings; and the biographical materials.

Credit: 2 semester-hours

ENGLISH 507. *Critical Writing*

This course evolves a body of critical principles for judging art and literature, and provides training in the writing of criticism, ranging from comments upon pupils' themes to a full and comprehensive essay upon the work of some outstanding author. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 511. *The History of Literary Criticism*

The purpose of this course is to familiarize the student with the chief doctrines of the great critics from Aristotle to I. A. Richards and T. S. Eliot and to correlate these critical doctrines with the outstanding writings of each age. By such a study it is possible for the student to evaluate the historical interrelations of expert criticism and literary production. A basic text is used, but much of the information is gleaned from source materials.

Credit: 2 semester-hours

ENGLISH 512. *The Growth and Structure of the English Language*

This course is designed to help the high school teacher understand the structure of modern English, one of the most complicated of contemporary tongues. Through an analysis of the historical evolution of our language, the student discovers the reasons for many of the seemingly illogical and arbitrary characteristics of modern English spelling, grammar, and morphology.

Credit: 2 semester-hours

ENGLISH 513. *The Renaissance*

This course deals with Petrarch and the Humanists; Boccaccio and the *Novelle*; the House of the Medici, Savonarola, the Popes; Machiavelli and *The Prince*; Cellini and the *Autobiography*; Castiglione and *The Courtier*; Boiardo, Pulci, Ariosto, and the romantic epic; the drama; Rabelais and *Gargantua and Pantagruel*; Ronsard and the French *Pleiade*; Cervantes and *Don Quixote*; and the art of Da Vinci, Botticelli, Michelangelo, Raphael, Titian, and others.

Credit: 2 semester-hours

ENGLISH 514. *Origin and Development of the Arthurian Legend*

This course deals with the vague and tentative beginnings of the Arthur story in early chronicle legend; with Geoffrey of Monmouth's

pseudo-historical and Chretien de Troyes's romantic treatments; with the great medieval recapitulations of Gottfried von Strassburg, Wolfram von Eschenbach, and Sir Thomas Malory; with the Victorian retellings of Tennyson, Arnold, and Morris; with the musical adaptations of Wagner; and with the modern versions of E. A. Robinson. It includes a detailed history of the development of the legend in its divers forms.

Credit: 2 semester-hours

ENGLISH 515. *Robert Browning*

Browning's characteristic shorter poems are recalled or studied in order to define his fundamental ideas as a writer. This study is followed by a study of his longer poems and dramas, the "soul-studies," and Browning's masterpiece, *The Ring and the Book*. These works are studied to illustrate the development of Browning as man, poet, and philosopher, and a reflection of certain phases of Nineteenth-Century life and thought.

Credit: 2 semester-hours

ENGLISH 516. *Language Problems in the English Curriculum*

This course reviews the several theories of language, and studies the problem of meaning in order to arrive at a suitable technique for the interpretation of prose and verse. This technique is then applied to the problems of reading, of composition, of speech, and of appreciation of literature. The course has two aims: to increase the student's own skill in dealing with language, and to increase his effectiveness in teaching. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 517. *Recent Research and Experiment in the Teaching of English*

This course evaluates current research in the fields of language, literature, and composition, and examines recent experiment in methods of teaching English. The course throws light on the problems of English teaching in secondary schools and evaluates tendencies in this field. The course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 518. *The Major Romantic Poets*

This course of Coleridge, Wordsworth, Scott, Byron, Shelley, and Keats devotes especial attention to the poems which are best adapted for the reading of high school students.

Credit: 2 semester-hours

ENGLISH 519. *English in the Modern High School*

This seminar considers the methods and materials requisite to the development of a program in the language arts (listening, speaking, reading, and writing). The course is accepted for certification by the State Department of Education. The text is Bulletin No. 17 of the State Department, *Growth in Language From Kindergarten Through High School*.

Credit: 2 semester-hours

ENGLISH 520A and 520B. *Great Books on Education*

Students examine the classics dealing with educational theory and practice which they so often read about but rarely consult. Part A deals with Plato's *Republic*, Xenophon's *Cyropaedia*, Cicero's *De Oratore*, Castiglione's *The Courtier*, Machiavelli's *Prince*, Rabelais's *Abbey of Theleme*, Ascham's *Schoolmaster*, Bacon's *Novum Organum*, Defoe's *Projects*, Milton's *To Samuel Hartlib on Education*. Part B deals with Rousseau's *Emile*, Byron's *Don Juan*, Hughes' *Tom Brown's Schooldays*, Newman's *Idea of a University*, the Arnold-Huxley debates, and the works of John Dewey and Jacques Barzun. This course is recommended for graduate students in the Department of Education.

Credit: 2 semester-hours each

ENGLISH 521. *English Literature of Social Problems*

This course surveys English literature from 1800 to 1914. The principal authors discussed include Shelley, Dickens, Kingsley, Tennyson, Carlyle, Butler, Meredith, Galsworthy, Bennett, Shaw, and Wells.

Credit: 2 semester-hours

ENGLISH 525. *The Development of the American Novel*

The American novel as a contemporary art form is examined in this course. Beginning with the novels of the early Nineteenth Century, the course traces the rise and development of the Romantic and the Realistic novel and concludes with an example of American Naturalism. Written criticism of five novels is required of candidates for the A.M. degree.

Credit: 2 semester-hours

ENGLISH 528. *New Perspectives in World Literature*

The point of view of our own democratic culture is surveyed and established in an attempt to see how the literatures of Western

Europe, the Middle East, and the Orient have influenced and are influencing modern thinking. Such perspectives are designed to provide adequacy in teaching a world point of view through literature.

Credit: 2 semester-hours

ENGLISH 530. *Dante and His Influence in England and America*

Fully two-thirds of the time of this course is devoted to rereading and reassessment of Dante himself in English translation. When Dante's meaning has been revealed, his continued influence from Chaucer through Sackville, Spenser, and Milton to Rossetti, Longfellow, and T. S. Eliot becomes the subject of investigation.

Credit: 2 semester-hours

ENGLISH 531. *Seventeenth Century Literature*

This course investigates the prose style and intellectual content of such writers as Bacon, Burton, Walton, Hobbes, Bunyan, Pepys, and Dryden. Similarly, it studies the poetic expression of experience in Donne, Jonson, Herbert, Herrick, Cowley, Vaughan, Suckling, Lovelace, Waller, and others.

Credit: 2 semester-hours

ENGLISH 532. *The Victorian Novel*

This course is an intensive study of the novel in Victorian England. A review of the development of the English novel before this period is followed by studies in the works of Dickens, Thackeray, Austen, Eliot, Trollope, Meredith, and Hardy. Novels studied in the high school are treated professionally.

Credit: 2 semester-hours

ENGLISH 533. *Masters of American Literature*

Significant American writers, including Irving, Hawthorne, Poe, Emerson, Melville, Whitman, and Mark Twain, are studied to discover their contributions to American life and to reveal important forces in our national background.

Credit: 2 semester-hours

ENGLISH 534. *Medieval Epic, Saga, and Romance*

This course deals with the chief medieval epics, sagas, and romances translated into Modern English from the literature of England,

France, Germany, Ireland, Iceland, Wales, and Italy. Attention is given both to those narratives which reflect the life of a particular country and to those which are international and express more generally the spirit of medieval Europe.

Credit: 2 semester-hours

ENGLISH 535. *Eighteenth Century Literature*

Major essayists, poets, dramatists, novelists, and letter writers are read and evaluated in terms of the thought, life, and literary movements of their own time and in terms of their significance for the present generation. Authors studied include Addison, Steele, Defoe, Swift, Goldsmith, Sheridan, Gray, Johnson, Boswell, Cowper, Richardson, Fielding, Sterne, Smollett, and Burke. High-school classics receive special attention.

Credit: 2 semester-hours

ENGLISH 536. *Philosophy of Great Literature*

By studying one or two masterpieces in a given semester, this course aims to help the student achieve a systematic understanding of the philosophic world-views and life-views implicit in such works as: Aeschylus's *The Oresteia*; Plato's *Timaus*; Boethius's *Consolations of Philosophy*; Dante's *Divine Comedy*; Shakespeare's *Hamlet*; Milton's *Paradise Lost*; Pascal's *Pensees*; Goethe's *Faust*; Blake's *The Marriage of Heaven and Hell*; Dostoievski's *Brothers Karamazov*; Mann's *The Magic Mountain*; Hesse's *Demian*; Henry Adams' *Mont St. Michel and Chartres*; the *Bhagavad-Gita*; Lao-tse's *The Book of Tao*; and Auden's *Collected Poetry*.

Credit: 2 semester-hours

ENGLISH 537. *American Drama in American Democracy*

This course uses plays produced upon the American stage to illustrate the development of democratic concepts from Colonial Days to the contemporary theatre.

Credit: 2 semester-hours

ENGLISH 538. *American Literature of Social Problems*

This course surveys the American literature which presents social problems during the period from 1800 to 1914 to discover the attitudes of the various authors toward these problems. The works of such authors as Cooper, Lowell, Thoreau, Whitman, Howells, Bellamy, Garland, and Glasgow are studied from this point of view.

The social background of the period is discussed to give perspective but the emphasis is upon the reflection of the problems in literature.

Credit: 2 semester-hours

ENGLISH 539. *Theatre and Society*

Dramatic expression from the time of the ancient Greeks to the present is studied carefully to analyze social, political, and ethical trends as they are reflected in the drama. The members of the course prepare analyses of social trends in contemporary drama. This research provides the basis for reports given during the latter part of the course.

Prerequisite: ENGLISH 102 or its equivalent

Credit: 2 semester-hours

ENGLISH 541. *The Teaching and Appreciation of Poetry*

This course is both personal and professional. It develops the student's appreciation of poetry as an expression of life and as a form of art, and it considers in detail the aims and methods of teaching poetry. This course is conducted as a seminar.

Credit: 2 semester-hours

ENGLISH 543. *Contemporary American Literature*

This course studies the major authors and literary movements in America during the contemporary period. Beginning where the course in *Masters of American Literature*, ENGLISH 533, normally ends, it is designed to complete a unit in this subject.

Credit: 2 semester-hours

ENGLISH 544A and 544B. *Shakespeare*

This course, in two parts, presents all of Shakespeare's plays as opposed to those taught only in high school, which is the chief concern of ENGLISH 301B. Here the poet's full development can be seen, providing a complete critical experience. Critical analysis, contentual evaluation, and textual problems are the main areas of concern. Part A deals with the tragedies; Part B, the comedies. The chronicle plays are woven into the discussion.

Credit: 2 semester-hours

ENGLISH 545A and 545B. *American Literature*

The chronological survey reflects the interplay of life and letters in the American scene, examining the political, social, and ethical motivations of the great movements in literature, and reading the separate works in the light of the influences that brought them into being. Part A commences with the Puritan Tradition and ends just as the Civil War is beginning. Part B traces, in life and in literature, the growth of the great democratic tradition in America.

Credit: 2 semester-hours

ENGLISH 548. *Fiction as an Image of World History*

This course presents a sequence of historical and cultural novels which aims to present insight into the eras of man's history from pre-historic to present time. Among novels read are: Jensen, *The Long Journey*; Mann, *Joseph and His Brothers*; Yourcenas, *Hadrian's Memoirs*; Merejowski, *The Romance of Leonardo da Vinci*; Reade, *The Cloister and the Hearth*; and Manzoni, *The Betrothed*.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions of these courses see the undergraduate catalog.

ENGLISH 402. *Survey of British Literature to 1798*

This course draws together into a systematic narrative the story of the development of English literature from the beginnings to the romantic triumph in 1798.

Credit: 3 semester-hours

ENGLISH 404. *Survey of British Literature*

This course is a continuation of ENGLISH 402. It takes up the story with the romantic triumph of 1798 and continues to the present time.

Credit: 2 semester-hours

ENGLISH 406. *The Modern Novel*

Emphasis is given to British and American novels since 1870, and the important tendencies of present-day prose fiction are explored. Students are taught how to read a novel with profit, and how to guide and direct the reading of others.

Credit: 2 semester-hours

ENGLISH 407. *British and American Biography*

Both the old and new types of biography are read and studied in this course, with emphasis upon the Nineteenth and Twentieth Centuries. Biography is presented for its cultural and informational value, for its use in integrating the work of the various departments in the high school, and for its direct help in the vocational guidance program.

Credit: 2 semester-hours

ENGLISH 408. *Creative Writing*

Students in this course attempt seriously to write the standard literary forms in prose and verse. Each student is assisted in finding his own best field of writing, and is given further training in that field. The course is based entirely upon the needs of the class as revealed in student-written manuscripts. Much time is devoted to

criticism and discussion of mutual problems. Wherever possible, the course is made to reflect methods of creative teaching in the field of composition.

Credit: 2 semester-hours

ENGLISH 413. *Modern Poetry*

This course deals with the work of contemporary poets, both British and American. Much of the best modern poetry is studied for interpretation and appreciation. The distinctive poetry "movements" that have occurred during the present century are examined as expressions of changing social and artistic ideals. Critical appreciation of poetry is developed through comparison of the diverse styles, themes, and poetic theories present in modern poetry.

Credit: 2 semester-hours

ENGLISH 419. *Grammar for Teachers*

This course is a study of the basic facts of grammatical relationships in English, and of the current problems of "rules" as opposed to "usage." The primary aim of the course is to acquaint students with the true functions of grammar in speech and writing.

Credit: 2 semester-hours

ENGLISH 420. *High School Classics*

This course is a seminar for prospective student teachers on the problems of teaching literature in high schools. The student reads numerous articles on the "classics" vs. "moderns" controversy, becomes thoroughly acquainted with the contents and aims of the best high school anthologies currently in use, and builds up a working philosophy for his own teaching.

Credit: 2 semester-hours

ENGLISH 421. *The Short Story*

The course traces the history of the short story as an evolving literary form, emphasizing the productions of the Nineteenth and Twentieth Centuries. Many stories are analyzed for both human and literary values. Professional use of the short story is the guiding purpose in the conduct of the course.

Credit: 2 semester-hours

ENGLISH 428. *The Film and Society*

This course considers the impact of the motion picture on our culture. The film is studied and evaluated as a powerful social and educative force, as an art form, and as an entertainment medium. The origin and development of film techniques are treated, and films are shown at each session, accompanied by analysis and discussion. The scenario as a literary type and the adaptation of prose fiction for film purposes are included in the course content.

Credit: 2 semester-hours

ENGLISH 432. *The Development of the Drama*

The development of the drama is studied in all periods from ancient Greece and Rome through the Middle Ages and the Renaissance to the beginning of modern drama with Ibsen. The emphasis is placed on the major characteristics of the drama and its necessary complement, the theater. Representative plays are read and discussed.

Credit: 2 semester-hours

ENGLISH 443. *Modern Drama*

An historical survey of trends, dramatists, plays, and accomplishments from Ibsen to the latest prize plays on Broadway provides background for this course. An examination of the structure and content of plays to determine what constitutes a good play stimulates appreciation. Students are encouraged to read widely and to see current productions on Broadway.

Credit: 2 semester-hours

ENGLISH 446. *The One-Act Play*

This course studies the one-act play as an art form, devoting special attention to plays which are suitable for high school production.

Credit: 2 semester-hours

ENGLISH 451. *Literature and Art in Western Culture*

This course deals with the nature of literature and considers its importance as a factor in the development of international understanding. Through reading the literature which is being read by our neighbors today, both in Europe and in the Western Hemisphere, students are able to participate in a common experience with them.

Credit: 2 semester-hours

ENGLISH 452. *Five Great Books*

The aim of this course is to broaden and to deepen the student's general cultural perspective by a study of five books which have profoundly influenced present civilization. The actual choice of texts is a cooperative class enterprise. Selections are made from such books as: *The Bible*, Homer's *Odyssey*, Plato's *Republic*, Shakespeare's *Hamlet*, Rousseau's *Confessions*, Goethe's *Faust*, Tolstoy's *War and Peace*, Dewey's *The School and Society*. This course is designed to provide leadership in local "Great Books" meetings.

Credit: 2 semester-hours

DEPARTMENT OF FOREIGN LANGUAGES

In answer to the growing demand for graduate work, the Foreign Language Department offers a program based on STUDY ABROAD. Through personal contact and experience, the student, thus, can increase both his knowledge and understanding in respect to the people whose language he is preparing to teach. This means that the student does part of his graduate work at a selected college in a country where the language of his major is spoken. To assist with this program of STUDY ABROAD, the Foreign Language Department yearly offers scholarships for qualifying applicants. These scholarships are sustained by a Student Exchange Fund. Students who are interested in obtaining a Study Abroad scholarship should consult with the Chairman of the Department for particulars. This program is open only to graduates of Montclair State College. Ten semester-hours of graduate credit are granted for this work. The remaining twenty-two hours necessary for the Master's degree are to be selected from graduate courses offered at Montclair. There is also required a final comprehensive examination in the student's major field. The following plan outlines the work for a Master's degree in the Department of Foreign Languages:

I. <i>Basic Professional Course Requirements</i>	<i>Credits</i>
Education 503. <i>Methods and Instruments of Research</i>	2
Education 603. <i>Principles and Practices of Research</i>	2
Elective in Education	2
	<hr/>
	6
II. <i>Requirements in Foreign Language Department</i>	
French 502. <i>Study Abroad</i>	
or	10
Spanish 502. <i>Study Abroad</i>	
Courses in Department	8
	<hr/>
	18
III. Electives in Department or Other Departments	
To be selected in consultation with the Graduate Counselor of the Foreign Language Department.	8
	<hr/>
Total	32
IV. Final Examination	

GRADUATE COURSES IN FRENCH

FRENCH 406. *The Contemporary French Novel*

This course is designed to acquaint students with the history and development of the French novel from Proust to the present day. Major currents and trends are analyzed; works of modern novelists, including Proust, Gide, Malraux, Sartre, and Camus are read and discussed. This course is conducted entirely in French.

Prerequisite: At least three years of college French and an interview with the instructor for others than Montclair State College graduates

Credit: 2 semester-hours

FRENCH 421. *French Language Seminar*

This course is designed to acquaint students on the graduate level with the effective use of the laboratory in language teaching. Problems relating to materials, methods, new techniques, facilities, and scheduling are discussed. This course is conducted entirely in French.

Prerequisite: An interview with the instructor

Credit: 2 semester-hours

LANGUAGE 402. *Advanced Phonetics*

This course is designed to provide students on the graduate level with a thorough foundation in Phonetic theory. Practical applications of this theory to the teaching of pronunciation and to the making of laboratory materials for correction of pronunciation are emphasized. Transcription and text analysis are practiced. Intensive work is done in the Language Laboratory.

Prerequisite: FRENCH 310 or equivalent, or interview with the instructor

Credit: 2 semester-hours

LANGUAGE 515. *The History of the French Language*

This course is designed to acquaint the student with the developmental processes in language with special reference to French. It examines also the relationship between language change and cultural change. The French language is studied from its origins to the present time with units in Vulgar Latin, Old French, Middle French, Renaissance French, and Modern French. At each step, development phonology, morphology, and vocabulary are studied along with social backgrounds.

Prerequisite: 2 years of High School Latin

Credit: 2 semester-hours

GRADUATE COURSES IN SPANISH

SPANISH 415. *Projects in Spanish and Spanish American Folklore*

The purpose of this course is to give the Spanish teacher and Spanish majors a good understanding of the culture of Spain and Spanish America through the study of the different folklore expression of those countries. The traditions, the customs, the music and dances of the different regions of Spain and of the several Spanish nations, including Puerto Rico, are studied with a view of understanding sources and the influence that they have had in the history and lives of the peoples of those countries.

Prerequisite: At least three years of College Spanish and an interview with the instructor for others than Montclair State College graduates

Credit: 2 semester-hours

SPANISH 425. *Contemporary Spanish-American Poetry*

This course considers the development of Spanish-American poetry from 1890 until recent times including Ruben Dario, the impact of *Modernismo* in Spanish literature, the anti-modernist reaction, and the four major feminine poets, as antecedent for the appreciation and evaluation of Neruda, Pellicer, Marechal, Borges, Gorostiza, Carrera Andrade, Florit, Villaurrutia and Octavio Paz. Readings from recently published books and poetry magazines of wide circulation in Latin America are included.

Prerequisite: At least three years of College Spanish and an interview with the instructor for others than Montclair State College graduates

Credit: 2 semester-hours

SPANISH 430A. *The Spanish Short Story, I*

This course covers the study of the origin and development of the short story in Spain from the Middle Ages to the present time. Different types of short stories are studied in order to explain historically and sociologically the appearance of themes written in Spanish through the centuries. The aim of the course is to give the student additional understanding of the Spanish people, culture, and history as expressed by the Spanish short-story writers from the Thirteenth Century to the present Twentieth Century. This course is open only to seniors and graduate students.

Prerequisite: At least three years of College Spanish and an interview with the instructor for others than Montclair State College graduates

Credit: 2 semester-hours

SPANISH 430B. *The Spanish Short Story, II*

This course covers the study of the Spanish short story as it developed in Hispanic America. This course is open only to seniors and graduate students.

Prerequisite: At least three years of College Spanish and an interview with the instructor for others than Montclair State College graduates

Credit: 2 semester-hours

SPANISH 505. *Spanish Literary Expression and Style*

This course presents a complete review of language skills through the study of representative Spanish literary schools and periods, with emphasis on vocabulary building, oral and written literary expression. The theory and practice of interpretation, the analysis of problems, language structure, and semantics are included. Practical exercises, composition, and comparison between original Spanish works and their English translations form an important part of the course work.

Prerequisite: At least three years of College Spanish and an interview with the instructor for others than Montclair State College graduates

Credit: 2 semester-hours

SPANISH 506. *Spanish American Novel*

The purpose of this course is to acquaint the student, through extensive reading and intensive discussion, with representative Spanish American novels from the XVI Century to the present time. These works include narratives depicting life in early colonial times; the novel of adventure; the picaresque tale; the romantic novel in its many different expressions, historical, indianistic, and descriptive; the psychological novel; the novel of the land; and the sociological novel. The students acquire a fundamental understanding of the history, life, customs, traditions, problems, and strife of the Spanish American people, as interpreted by their best novelists. The lives of the authors are studied to present a better picture of the country and the special circumstances depicted in the literature. The students are asked to evaluate the books studied as well as the criticism on them. Through this course the teacher of Spanish should become more thoroughly acquainted with the masterpieces of the Spanish American novel.

Prerequisite: At least three years of College Spanish and an interview with the instructor for others than Montclair State College graduates

Credit: 2 semester-hours

LANGUAGE 402. *Advanced Phonetics*

This course is especially designed for Spanish teachers who wish to achieve a correct pronunciation and enunciation according to the best patterns of speech of the Spanish language. An intensive study is made of the manner and of the place of articulation of sounds heard in the Spanish spoken by the educated vernacular speakers of Spain and Spanish America. Skill is developed in the formation of the sounds of the Spanish vowels and the student is asked to compare them to the English vowels, marking differences. The difference between the articulation of the Spanish and the English consonants is demonstrated.

Prerequisite: At least three years of College Spanish and an interview with the instructor for others than Montclair State College graduates

Credit: 2 semester-hours

DEPARTMENT OF INDUSTRIAL ARTS EDUCATION

Graduate work in the Department of Industrial Arts Education is designed to help teachers of industrial arts (1) to become more proficient in teaching through study of recent trends and new developments in the field, (2) to improve organization of the industrial arts laboratory, and (3) to provide a basis for work in supervision and administration. Advanced work in industrial arts and related areas which will meet needs and broaden professional experiences of industrial arts teachers is emphasized.

An undergraduate major as established by the State Board of Education is a prerequisite for matriculation as a candidate for the degree. Individuals who have an undergraduate major in this area, but who do not wish to work toward a degree, may enroll in graduate courses in the department with the consent of the adviser.

GRADUATE PROGRAM OF STUDIES
MASTER OF ARTS DEGREE IN INDUSTRIAL ARTS
EDUCATION

I. <i>Basic Professional Course Requirements</i>	S. H.
A. Ed. 503. <i>Methods and Instruments of Research</i> (Mathematics 400, <i>Educational Statistics</i> , is a prerequisite for Education 503.)	2
B. Each student with the approval of his adviser selects four more semester-hours of education credit. (Two 500-level courses for two semester-hours each—preferably in the areas of administration, curriculum, guidance, or supervision.)	4
Total	6
II. <i>Industrial Arts Requirements</i>	
A. Each student, with the approval of his adviser, selects eighteen semester-hours of departmental work.	
Ind. Arts 501. <i>Curriculum Construction and Course Organization in Industrial Arts Education</i> —2 semester-hours	
Ind. Arts 502. <i>Shop Planning and Equipment Selection in Industrial Arts Education</i> —2 semester-hours	
Ind. Arts 503. <i>Problems in Teaching Industrial Arts</i> —2 semester-hours	
Ind. Arts 508. <i>Survey of Industrial Arts Literature</i> —2 semester-hours	
Ind. Arts 511. <i>Supervision of Industrial Arts</i> —2 semester-hours	
Ind. Arts 601. <i>Seminar in Industrial Arts Problem Solving Approach to Teaching</i> —4 semester-hours	
Ind. Arts 602. <i>Seminar in Research and Experimentation in Industrial Arts Education</i> —4 semester-hours	
Total	18

If the candidate chooses to develop a thesis, creative project, or field study, as a part of, or following research in EDUCATION 503 and INDUSTRIAL ARTS 602, a departmental sponsor is appointed. The "Regulations of Research and Thesis Requirements" are followed in the completion and acceptance of the thesis. Credit for such a project is to the extent of four semester-hours.

- B. All candidates are required to submit a finished copy of their EDUCATION 503, *Methods and Instruments of Research*, paper to the Chairman of the Industrial Arts Department.

III. *Electives*

The candidate may select, after consultation with his adviser, courses to round out his background. Candidates are urged to explore the offerings in other departments and select as widely as possible in those areas not represented in undergraduate study.

Total 8

Comprehensive Examination

Each candidate who does not choose to develop a thesis, creative project, or field study, must pass a written comprehensive examination before the degree is awarded. The examination is given during the spring semester each year. Students desiring to take the examination should notify the Graduate Office prior to the beginning of the spring semester. They are then notified of the date and provided with general information pertaining to the examination.

Grand Total 32

GRADUATE COURSES

INDUSTRIAL ARTS 501. *Curriculum Construction and Course Organization in Industrial Arts Education*

Curriculum construction techniques used in developing a program of industrial arts are studied. Special emphasis is placed on the development of industrial arts courses of studies and instructional materials.

Credit: 2 semester-hours

INDUSTRIAL ARTS 502. *Shop Planning and Equipment Selection in Industrial Arts Education*

Principles of planning and equipment selection for modern industrial arts laboratories are stressed. The practical application includes architectural aspects, floor plan layouts, equipment selection, bid preparations, and construction of scaled laboratory models.

Credit: 2 semester-hours

INDUSTRIAL ARTS 503. *Problems in Teaching Industrial Arts*

Problems which teachers encounter in the industrial arts laboratory are analyzed. Individual and group reports are prepared, discussed, and evaluated in an effort to gain a better insight into these problems.

Credit: 2 semester-hours

INDUSTRIAL ARTS 508. *Survey of Industrial Arts Literature*

Published material related to industrial arts is surveyed to determine its applicability to laboratory teaching and professional improvement. This includes historical writings on the development of industry and industrial education, research literature in the field, published materials provided by corporations and government agencies, and pertinent reference works, handbooks, and periodicals.

Credit: 2 semester-hours

INDUSTRIAL ARTS 511. *Supervision of Industrial Arts*

Principles and practices of supervision, as related to the modern industrial arts laboratory are discussed and evaluated. Special attention is given to supervisory techniques, budget supplies, inventories, maintenance, safety, and upgrading of in-service teachers.

Credit: 2 semester-hours

INDUSTRIAL ARTS 601. *Seminar in Industrial Arts Problem-Solving Approach to Teaching*

Students study the various techniques used in the problem-solving approach to teaching. Opportunity to plan and develop units as well as teaching materials based on this approach are evolved individually or by the group method.

Prerequisite: EDUCATION 503, *Methods and Instruments of Research*

Credit: 4 semester-hours

INDUSTRIAL ARTS 602. *Seminar in Research and Experimentation in Industrial Arts Education*

Each individual is required to select a research problem which can be explored in the industrial arts laboratory. The purpose is to plan an experimental project, select the needed materials, organize the procedure, construct the necessary testing equipment, conduct the experiment, and record the findings.

This departmental research course meets the research requirement for EDUCATION 603, *Principles and Practices of Research*.

Prerequisite: EDUCATION 503, *Methods and Instruments of Research*

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

The following courses are not required for the Master's degree in Industrial Arts Education. With the approval of the Chairman of the Department, they may be used as elective credits.

INDUSTRIAL ARTS 401. *Comprehensive General Shop for Elementary and Junior High Schools*

Laboratory experiences are geared to the principles and philosophy of the general shop at the elementary and junior high levels. Students plan and develop educational experiences which are related to the everyday living of both boys and girls.

Credit: 4 semester-hours

INDUSTRIAL ARTS 402. *Comprehensive General Shop for Senior High School*

Students are encouraged to develop new skills or perfect those already developed in the numerous technical areas in the general shop on the high school level. Instructional materials and individual and group educational experiences are planned and developed.

Credit: 4 semester-hours

INDUSTRIAL ARTS 407. *Field Studies of Industry*

A broad range of industrial firms are visited for purposes of noting and evaluating the processes used, the materials employed, the working conditions instituted, and the labor relations practiced. Every attempt is made to visit representative industries in the metropolitan area.

Credit: 4 semester-hours

INDUSTRIAL ARTS 411. *Industrial Photographic Techniques*

Photographic techniques in industry are reviewed in this laboratory course. Tools, materials, and equipment are used and evaluated in

connection with a variety of experiences in industrial photography and a consideration of recent developments in this field.

Credit: 2 semester-hours

INDUSTRIAL ARTS 421. *Jewelry Making and Lapidary*

Through laboratory experiences students have the opportunity to develop lapidary and jewelry-making skills. They cast, form, and design pieces in silver, gold, and other metals. The lapidary experiences cultivate skills in sawing, shaping, polishing, and mounting of stones to exhibit their desirable qualities.

Credit: 2 semester-hours

INDUSTRIAL ARTS 431. *Advanced Electronics*

The students develop an understanding of alternating current and direct current principles and their application in electronics. Students construct and trouble shoot radio and television circuitry using a variety of test instruments.

Credit: 2 semester-hours

INDUSTRIAL ARTS 442. *Conservation of Basic Industrial Materials*

Students, while living for ten days at the New Jersey State School of Conservation, Stokes State Forest, study the origin, development, use and consumption of basic materials as they exist in nature, by taking field trips to resources and industries, by employing a variety of instructional aids, and by talking with specialists in each specific area.

Credit: 2 semester-hours

INDUSTRIAL ARTS 443. *The Use and Processing of Basic Industrial Materials by Modern Industry*

Students live for ten days at the New Jersey State School of Conservation, Stokes State Forest. Study is devoted to recognition, use, and processing of basic natural materials, such as ores, wood, fuels, and agricultural products to improve their value as industrial materials, such as leather and plastics. The course is developed through the use of films, field trips, and discussion with industry specialists.

Credit: 2 semester-hours

DEPARTMENT OF MATHEMATICS

The graduate courses in mathematics are designed to meet the needs of teachers in service. There is opportunity for further study in pure mathematics, in applied mathematics, and in the teaching and supervision of mathematics. The courses in pure mathematics are designed to extend the student's knowledge of subject matter and to provide him with the background needed for teaching adequately in both traditional and experimental programs at the junior and senior high school levels. The courses in applied mathematics show the applications of mathematics in related areas of the physical, biological, and social sciences. The courses in teaching and supervision give attention to the current problems and proposals in mathematics education, the organization and construction of course syllabi, and administrative problems.

A candidate for the Master of Arts Degree in Mathematics should consult the Graduate Advisor of the Mathematics Department before matriculation, since the choice of graduate courses should be adjusted to the preparation acquired in undergraduate work. The student's work program, for a minimum of thirty-two semester-hours of work, is prepared in consultation with the Graduate Advisor. Any changes in the work program are made only with the written approval of that advisor.

REQUIREMENTS FOR THE MASTER'S DEGREE IN MATHEMATICS

I. *Prerequisites*

- A. The candidate for the A.M. degree must present an undergraduate major of at least *thirty semester-hours of mathematics*. Any deficiencies must be made up prior to conferment of the degree. This must be done in courses approved by the Graduate Advisor. The minimum requirement in category III below applies only to students with adequate previous preparation.
- B. *A year of calculus is a minimum prerequisite for registration in pure mathematics courses.*

II. *Professional Education Requirements*

minimum: 6 semester-hours

- A. Each candidate must take EDUCATION 503, *Methods and Instruments of Research*. This course should be taken *no later than the second year* in which the student registers for courses, since it is a prerequisite to MATHEMATICS 640.

- B. Each candidate must elect an additional four semester-hours in Education courses. These must be approved in advance by the Graduate Advisor in Mathematics.

III. *Mathematics Requirements* minimum: 18 semester-hours

A. Pure Mathematics

Each candidate must take at least one course in each of the following sets:

1. MATHEMATICS 503 and 504.
2. MATHEMATICS 508, 532, and 533.
3. MATHEMATICS 523 and 524.
4. MATHEMATICS 407 and 415 *if* not taken in undergraduate work.
5. MATHEMATICS 512, 517, 518, 519, 522, 531 and courses on the 400 level approved by the Graduate Advisor.

B. Applied Mathematics

Each candidate must take at least two courses in this area. These courses include MATHEMATICS 513, 551, 552, 602A, B, and C, and 603A, B, and C.

C. Teaching and Supervision of Mathematics

1. Each candidate is required to take MATHEMATICS 640, *Research Seminar in Mathematics*. This must be taken after or concurrently with EDUCATION 503.
2. Each candidate must take at least one additional course in this area. These courses include MATHEMATICS 501, 506, 507, 529, 530.

IV. *Elective Courses* minimum: 8 semester-hours

With the approval of the Graduate Advisor, the student may elect from among Mathematics courses, Education courses, or other graduate courses.

V. *Departmental Examination*

A final examination in mathematics is given all candidates prior to the conferment of the degree. This examination is general in nature and is designed to test the candidate's maturity of thought in mathematics and mathematics education.

VI. *Thesis (Optional)*

After consultation with the Graduate Advisor of the Mathematics Department and under the sponsorship of a member of the mathematics faculty, the candidate may choose to develop a thesis giving the results of some study in the field of mathematics or mathematics education. In this case, the requirement of MATHEMATICS 640 may be waived. The thesis will count in lieu of four semester-hours of elective study.

GRADUATE COURSES

MATHEMATICS 501. *Administration and Supervision of Mathematics*

This course is concerned with the problems met in organizing and supervising the teaching of mathematics. The topics considered are the functions and qualifications of the supervisor of mathematics, in-service training of teachers, demonstration lessons, professional attitude and preparation of teachers, department meetings, selection of texts, current problems, research, and the basis for determining objectives.

Credit: 2 semester-hours

MATHEMATICS 503. *Foundations of Algebra*

Careful consideration is given to the fundamental concepts and postulates which form the foundation of algebra. The modern algebraic theories of groups, rings, and number fields are introduced. The development of our number system, algebraic criteria for the possibility of geometric constructions, and the general theory and use of polynomial functions are considered.

Credit: 2 semester-hours

MATHEMATICS 504. *Modern Algebra*

Vectors and vector spaces are introduced as generalizations of numbers and number systems. Particular attention is also given to matrices, determinants, and linear dependence. Applications are considered.

Prerequisite: MATHEMATICS 503 or permission of the instructor

Credit: 2 semester-hours

MATHEMATICS 506. *Principles of Teaching Secondary School Mathematics*

The primary purpose of this course is to relate recent psychological research into the learning process to the presentation of specific areas of secondary-school mathematics. Among the topics considered are: motivation, concept formation, drill, transfer of training, problem solving, and provisions for individual differences.

Credit: 2 semester-hours

MATHEMATICS 507. *The Teaching of General Mathematics*

This course is concerned with mathematics programs for the non-college-bound high-school student. Reports and recommendations from curriculum studies are examined. Among the topics considered are: characteristics of non-academic students, consumer mathematics, remedial arithmetic, preparation and use of resource materials, and classroom teaching techniques.

Credit: 2 semester-hours

MATHEMATICS 508. *Foundations of Geometry*

The elements of geometry include the logical foundations of geometry, finite projective geometries, construction of rational points on a line and on a plane, and topology. The emphasis is on the mathematical prerequisites for understanding contemporary proposals for secondary-school geometry.

Credit: 2 semester-hours

MATHEMATICS 512. *Numerical Analysis*

This course deals with the determination of functions from observed experimental data. Among the topics considered are: finite differences, symbolic operators, differencing, interpolation formulae, the method of least squares, and harmonic analysis. The course is designed to show the nature of mathematics as an applied science.

Credit: 2 semester-hours

MATHEMATICS 513. *Computer Programming*

This course is concerned with the elementary mathematics of computer programming. The use of machines by high-school students and the development of simple codes are considered.

Credit: 2 semester-hours

MATHEMATICS 517. *The Theory of Numbers*

This course offers a systematic treatment of certain fundamental properties of numbers along with a discussion of their historical background. It includes such topics as: properties of integers; Euclid's algorism; prime numbers; factorization; perfect numbers; linear indeterminate and Diophantine problems; properties of congruences and their solutions; fundamental theorems of Euler, Fermat, Wilson, and others; and quadratic residues.

Credit: 2 semester-hours

MATHEMATICS 518. *The Theory of Functions of Real Variables*

The fundamental properties of real numbers and the elementary properties of functions of real variables are systematically developed. Among the topics considered are: continuity, differentiability, integrability, algebraic and transcendental functions, hyperbolic functions, and infinite series.

Prerequisite: MATHEMATICS 407 or permission of the instructor

Credit: 2 semester-hours

MATHEMATICS 519. *The Theory of Functions of Complex Variables*

The fundamental properties of complex numbers and the elementary properties of functions of complex variables are developed. These include the properties of mappings, line integrals, Cauchy-Goursat Theorem, and conformal mapping. The practical applications of the theory are stressed by the use of illustrative examples.

Prerequisite: MATHEMATICS 407 or permission of the instructor

Credit: 2 semester-hours

MATHEMATICS 522. *Introduction to Probability and Statistics*

The primary objective of the course is to give at least a minimum preparation in probability and statistics for the topics that are included in the newer high-school program. Topics include: the summarization of data, intuitive probability, axiomatic development of probability, the Binomial and Poisson distributions, the normal curve distribution, elements of sampling and elements of testing hypotheses. Both the experimental and the axiomatic approach to this material are studied. An examination of currently available material is included. This course is not open to students who have received credit for MATHEMATICS 307 or 408.

Credit: 2 semester-hours

MATHEMATICS 523. *The Theory of Probability*

This course develops the formal mathematical theory of probability and also describes the empirical background. In addition a variety of applications in both physical and social sciences are developed. Topics include: historical background; sample space; elements of combinatorial analysis; Binomial, Poisson, and Hypergeometric distributions; normal distribution; mathematical expectation; random walk; and ruin problems.

Credit: 2 semester-hours

MATHEMATICS 524. *Statistical Inference and Sampling Theory*

In this course the student considers the planning and execution of a statistical study. Among the topics considered are: problems in descriptive statistics, discrete and continuous distributions, elements of sampling theory, tests of hypotheses, power functions of statistical tests, analysis of variance and covariance, statistical control, statistical efficiency, and nonparametric statistics. Applications are given to industrial, scientific, and social problems.

Prerequisite: MATHEMATICS 307, 408, or 522

Credit: 2 semester-hours

MATHEMATICS 529. *Curriculum Construction in Mathematics*

This course is concerned with the implications and classroom implementation of contemporary recommendations for college preparatory curriculums in secondary-school mathematics.

Credit: 2 semester-hours

MATHEMATICS 530. *Mathematics Materials for the Teacher of Mathematics*

This course is concerned with the adaptation and use of materials to motivate and improve the teaching of high-school mathematics. Particular attention is given to the equipment needed for a modern mathematics laboratory; to the effective use of such equipment; to such visual aids as pictures, drawings, slides, motion pictures, and bulletin-board exhibits; and to books, periodicals, and pamphlets needed for the school and for the teacher's library. Material available for individual and club activities in mathematics is considered.

Credit: 2 semester-hours

MATHEMATICS 531. *Survey of Higher Mathematics*

This course is intended for students who have already taken several graduate courses in mathematics. The principal aim of the course is to provide these students with additional insight into the nature and content of the various fields of mathematics.

Credit: 2 semester-hours

MATHEMATICS 532. *Projective Geometry*

The methods of synthetic and analytic projective geometry are compared and used to emphasize the fundamental concepts of Euclidean

geometry. Emphasis is placed upon the dependence of many common properties and theorems of Euclidean geometry and upon the properties of lines, parallelism, perpendicularity, similarity of figures, and the definition of distance.

Prerequisite: MATHEMATICS 508 or permission of the instructor

Credit: 2 semester-hours

MATHEMATICS 533. *Non-Euclidean Geometry*

The development of Hyperbolic-Non-Euclidean and of Elliptic-Non-Euclidean geometry is carefully traced. A brief survey of the historical development of each is given. This course is designed for teachers and students of mathematics who desire a better perspective of the field of geometry.

Credit: 2 semester-hours

MATHEMATICS 551. *Mathematics of Social Sciences*

This course surveys the mathematics of economics, business, sociology, and psychology. The discussion includes such topics as: theory of investments, distribution of wealth and income, use of charts and graphs, business trends, and measurement and presentation of data in social sciences.

Credit: 2 semester-hours

MATHEMATICS 552. *Mathematics of Physical Sciences*

This course includes topics from physics; chemistry; and engineering. The chief purpose is to supply the teacher with background material that may be used to enrich the teaching of secondary-school mathematics.

Credit: 2 semester-hours

MATHEMATICS 602A, B, and C. *Workshop on Secondary School Mathematics*

These courses are conducted as workshops to provide teachers with increased insight into contemporary mathematics. The emphasis is upon mathematical principles and concepts. Topics are selected for their significance in revisions of secondary-school mathematics programs. The topics include: analysis of statements, sets, algebra of sets, foundations of algebra, probability, statistics, statistical inference, foundations of geometry, topology, and mathematics of the infinite.

Credit: 2 semester-hours each

MATHEMATICS 603A, B, and C. *Workshop on Junior High School Mathematics*

These courses provide the necessary mathematical background to understand and interpret current curriculum recommendations in the junior-high school. Areas covered include: structure of the number system, probability, foundations of algebra, and foundations of geometry, each of which is oriented for junior-high-school teachers. Current curriculum recommendations are examined.

Credit: 2 semester-hours each

MATHEMATICS 640. *Research Seminar in Mathematics*

This course is designed primarily for students who are fulfilling the College requirement of four semester-hours of research for candidates for the A.M. degree who matriculated after August 31, 1959. Candidates in mathematics select some problem of interest in either the subject matter or the teaching of mathematics for intensive study and research.

The student should register for EDUCATION 503 in the first semester of the year that he takes this seminar. He, thus, has the advantage of consultation with both research and mathematics advisers while conducting his investigation.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

MATHEMATICS 405. *History of Mathematics*

This course surveys the history of elementary mathematics, through calculus, from ancient times to the present. Emphasis is on the major developments in the fields of arithmetic, algebra, and geometry and on contributions of leading mathematicians. The solution of mathematical problems in their historical context is an important part of the course. A by-product is the motivating effect of historical information on the teaching and learning of mathematics.

Credit: 2 semester-hours

MATHEMATICS 406. *Solid Analytic Geometry*

This course includes a study of the basic elements of three-dimensional analytic geometry along with reference to the extensions to n dimensions. Topics are: coordinates and graphs, vectors, planes and lines, applications of determinants and matrices, surfaces and curves, quadric surfaces and their classification, the general equation of the second degree, and coordinate and point transformations.

Credit: 2 semester-hours

MATHEMATICS 407. *Advanced Calculus*

The purposes of this course are twofold: fundamental notions of calculus, such as sequences, limits, differentiation, integration, the Generalized Theorem of the Mean, partial derivatives, multiple integrals, and infinite series are rigorously developed and examined; also, some extensions of these basic concepts are introduced. In this latter set are such topics as: line integrals through Green's Theorem, Fourier series, elliptic integrals, and gamma and beta functions.

Credit: 2 semester-hours

MATHEMATICS 409. *Introduction to Contemporary Mathematics*

The aim of this course is to develop the point of view of contemporary mathematics and to consider its potential influence upon secondary-school mathematics. Consideration is given to topics in professional literature for possible inclusion in secondary-school mathematics. Topics include sets, Boolean algebra, a modern concept of variable and function, a detailed study of sentences and statements, the use of symbolism and patterns in mathematics, linear pro-

gramming, and application of new mathematical techniques in social sciences.

Credit: 2 semester-hours

MATHEMATICS 410. *Mathematics of Finance*

This course introduces the elementary theory of simple and compound interest and leads to the solution of practical problems in annuities, sinking funds, amortization, depreciation, stocks and bonds, installment buying, and savings and loan associations. It discusses the mathematics of life insurance covering the following: the theory of probability as related to life insurance; the theory and calculation of mortality tables; various types of life annuities and insurance policies and reserves. This course gives a helpful background to the mathematics teacher and aids the student of economics and insurance.

Credit: 2 semester-hours

MATHEMATICS 411. *Elements of Mathematical Thought*

This course acquaints students having a limited background in mathematics with the logical structure of mathematics. There is an emphasis on postulational foundations and the reasoning process itself. Topics considered include: the nature of mathematical knowledge, the origin and influence of logical systems, essentials of logical reasoning, and examples of logical systems from algebra and geometry.

Undergraduate mathematics majors desiring to take this course must secure special permission.

Credit: 2 semester-hours

MATHEMATICS 412. *Modern Geometry*

This course is concerned with synthetic and coordinate methods in plane and solid geometry. It provides students who have not taken MATHEMATICS 301 with background for teaching secondary-school geometry. It is not open to students who have taken MATHEMATICS 301. The structure of high-school geometry and foundations of geometry are also considered with trends and proposals for secondary-school geometry.

Credit: 4 semester-hours

MATHEMATICS 415. *Differential Equations*

Applications of differential equations and their standard methods of solution are treated in this course. Topics are: linear differential equations of the first degree and of the first and higher orders, linear

equations of the n th order with constant coefficients, linear equations of the second order, exact and total differential equations, simultaneous equations, numerical approximation, and series solutions.

Credit: 2 semester-hours

MATHEMATICS 453. *Differential Calculus*

Concepts of differential calculus are developed for science students who have taken one year of college mathematics. Topics include: functional relationships, slope, limit, continuity, graphical representations of science problems, differentiation of algebraic and transcendental functions, geometric and physical application of derivatives, velocity, and acceleration in curvilinear motion. Applications are developed utilizing the scientific background of the students. Students credited with MATHEMATICS 201 may not take this for credit.

Credit: 3 semester-hours

MATHEMATICS 454. *Integral Calculus*

Concepts of integral calculus are developed for students who have completed MATHEMATICS 453 or equivalent. Topics include: integration procedures, solid analytic geometry, and geometrical and physical applications of the definite integral in two and three dimensional problems. Applications utilize the scientific background of the students. Students credited with MATHEMATICS 202 may not take this for credit.

Credit: 3 semester-hours

MATHEMATICS 480. *Elements of Logic*

This course develops an understanding of methods of reasoning used in the mathematical sciences. The point of view and elementary processes of symbolic logic are studied. Background materials are included for teaching of logical concepts in secondary schools.

Credit: 2 semester-hours

DEPARTMENT OF SCIENCE

The graduate program of the Science Department is designed to help the science teacher with the problem of maintaining his professional competence with respect to recent advances in the fields of science and science education.

Prior to matriculation in the Science Department for the Master of Arts degree the student should complete a subject matter background of at least twenty-four semester hours of college science. This undergraduate program must show breadth in the three areas of science, biology, chemistry, and physics, plus sufficient depth in at least one area to serve as a base for the graduate program. If the degree candidate does not meet these provisions, the graduate adviser in science may require that the six semester-hours of electives in the graduate program be taken in the major area.

In cases where there is a weak undergraduate program in the major field, prerequisite courses, not for graduate credit, may be assigned. In general, the assignment of elective hours to the major area would compensate for deficiencies in depth of preparation while prerequisite courses would compensate for deficiencies in breadth.

A minimum of eighteen semester-hours of graduate credit work in science is required. The student's work program is prepared in cooperation with the science adviser. Any changes in the student's work program are made only with the written approval of the science adviser.

COURSE REQUIREMENTS FOR THE A.M. DEGREE IN SCIENCE

I. *Education Requirements*

Each student must take EDUCATION 503, *Methods and Instruments of Research*, and four additional semester-hours in Education courses.

II. *Science Requirements*

- A. The candidate must complete three four-semester-hour courses from among the following:

Biology	407, 408, 409, 410, 411, 415, 506, 509
Chemistry	407, 408, 411, 412, 508, 509, 510
Physics	402, 405, 406, 407, 408, 409, 411, 416, 510, 512
Science	405, 410, 421

12 semester-hours

- B. The candidate may elect two to three semester-hours from among the following:

Biology 501, Chemistry 501, Science 401D, Physics 501

- C. The candidate may elect up to six semester-hours from among the following:

Biology	412, 413, 414
Chemistry	413, 414
Physics	513
Science	409, 410, 411, 412, 413, 414, 415, 418, 419, 420

- D. The candidate must complete the departmental research requirement by one of the two procedures below:

SCIENCE 505 *Research Seminar in Science* 2 s. hrs.

or

GRADUATE 600 *Master's Thesis* 4 s. hrs.

If the candidate chooses to develop a thesis following completion of EDUCATION 503, a departmental sponsor is appointed and the "Regulations of Research and Thesis Requirements" are followed in completion and acceptance of the thesis. The preparation of such a dissertation does not relieve the candidate of any of the required work in *science*.

- E. After consultation with his adviser, the candidate may elect from among science courses, education courses, or other courses on the 400-500 level.

Maximum possible for E—6 semester-hours

BIOLOGY

GRADUATE COURSES

BIOLOGY 501. *The Teaching of Biology in Secondary Schools*

This is a seminar and research course designed to give opportunity for study of the best methods and practices being used in the teaching of secondary school biology. Major topics of discussion are: aims of secondary school biology, course content, functions of textbooks, testing, laboratory exercises and demonstrations, and the collection and use of suitable and available laboratory materials. A study is made of recent research studies in the field of biology teaching.

Prerequisite: 16 semester-hours of work in biology

Credit: 3 semester-hours

BIOLOGY 506. *Histology and Histological Technique*

This course includes a study of the microscopic anatomy of living forms in order to bring about the fuller appreciations of their structure and function. The structural characteristics of cells and their specialization according to function are considered as well as the organization of this basic unit into the tissues and organs of the intact form.

The study of histological preparations during the laboratory period gives the student an opportunity to learn the characteristics of each tissue and organ. Basic procedures for the preparation of tissue sections and permanent mounts are covered.

Prerequisite: 8 semester hours of work in biology

Credit: 4 semester-hours

BIOLOGY 509. *Field Studies of Flowering Plants*

The emphasis of this course is placed upon the methods of identification of higher plants and the ecological factors affecting the growth and development of these plants. Plants in their winter conditions are considered first. As the season progresses, the emphasis changes from the identification of woody to herbaceous forms. Plant communities of various types are observed, and the factors influencing their development are discussed. Field trips are taken to such typical habitats as the Pine Barrens, Troy Meadows, and others.

Prerequisite: General botany

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES

BIOLOGY 407. *Comparative Embryology*

A study is made of the stages in development and factors influencing the development of different animal types, particularly the vertebrates. Serial sections of entire chick embryos in different stages of development are prepared by individual students and used as a basis for the study of the development of tissues and organs of the animal. The details of the development of the mammal are based on the dissection of pig embryos.

Prerequisite: 8 semester-hours of work in zoology

Credit: 4 semester-hours

BIOLOGY 408. *Biological Technique*

This course is designed to furnish the teacher of biology with the technical details necessary to enable him to handle successfully biological materials and experiments and demonstrations in which these materials are employed. Students are trained in methods of collecting and preserving plants and animals for use in the classroom. Study is made of the proper methods of preparing illustrative materials with special emphasis laid upon the purpose of these materials.

Prerequisites: 8 semester-hours of work in zoology and 4 semester-hours of work in botany

Credit: 4 semester-hours

BIOLOGY 409. *Human Physiology*

A study is made of normal and abnormal physiology based on previous study of mammalian anatomy and histology. In addition to an analysis of the part played by organs and tissues in carrying out the essential functions of the body, special attention is given to problems of hygiene and sanitation. Applications of the above problems are made in reference to children of school age, and the physical condition of individual pupils is correlated with their behavior in the classroom.

Prerequisite: A course in vertebrate anatomy or BIOLOGY 402

Credit: 4 semester-hours

BIOLOGY 410. *Comparative Anatomy of the Vertebrata*

This course deals with representative members of the phylum chordata. The prochordata are considered briefly. Representative

species of the cyclostomata, cartilaginous fish, bony fish, amphibia, reptiles, birds, and mammals are studied by means of dissections and demonstrations. Fundamental principles of the taxonomy, anatomy, physiology, and ecology are reviewed and amplified.

Credit: 4 semester-hours

BIOLOGY 411. *Elementary Bacteriology*

This course covers the morphological and biochemical characteristics of bacteria, yeasts, fungi, and protozoa. Major topics include: history of microbiology, classification and naming, the physiology of microorganisms, microbiologic techniques and methods, useful activities of microorganisms, microbiology of sewage and water, microbiology of foods, infection and body defenses and infectious diseases.

Prerequisites: BIOLOGY 101, 102, 201, and 202

Credit: 4 semester-hours

BIOLOGY 412. *Genetics*

This course considers the scientific basis of the gene concept and its support in experiments from Mendel's work to the present. Documents of some of the milestones in the history of the science are studied. The wide uses of the science in plant and animal improvement and the discoveries related to man's heredity make an integral part of the study.

Prerequisite: An elementary college course in biology

Credit: 2 semester-hours

BIOLOGY 413. *Economic Botany*

The consideration of the importance of plants and plant life to the world in general and to man in particular is the principal aim of this course. The economic importance of bacteria, fungi, and other lower plants is considered as well as that of the seed plants.

Credit: 2 semester-hours

BIOLOGY 414. *Field Ornithology*

This course deals primarily with the identification and natural history of birds. A variety of habitats is visited so that one can become acquainted with the habits and requirements of this unusually well-

adapted vertebrate type. Migration, ecological relationships, and other problems are considered.

Prerequisite: A year of biology or the equivalent

Credit: 2 semester-hours

BIOLOGY 415. *Entomology*

This course is designed to give an overview of the fundamental aspects of entomology. The major emphasis is on understanding basic principles which are of physiological and ecological significance. A survey is made of the common insect orders and families. Attention is given to economic importance of insects. Laboratory work includes a study of gross and microscopic morphology and identification of major groups of insects by the manipulation of keys.

Prerequisites: BIOLOGY 201 and 202

Credit: 4 semester-hours

CHEMISTRY

GRADUATE COURSES

CHEMISTRY 501. *The Teaching of Chemistry in Secondary Schools*

A study is made of the objectives, recent trends, methods of presentation, courses of study, lesson planning, instructional aids, and subject matter of high school chemistry.

Prerequisite: 16 semester-hours in chemistry

Credit: 3 semester-hours

CHEMISTRY 508. *Biochemistry*

In this course a study is made of the composition of living organisms, their nutritional requirements, their mechanism for promoting and regulating chemical action, and their metabolism of foods. A laboratory study is made of the components of foods, enzyme action, isolation of proteins, etc., blood and urine analysis.

Prerequisites: CHEMISTRY 405 and 406, organic chemistry

Credit: 4 semester-hours

CHEMISTRY 509. *Advanced Inorganic Chemistry*

This course offers opportunity for intensive and systematic study of the elements in the light of the periodic classification. Selected theories and principles of inorganic chemistry and some of their applications are studied in detail. A study is made of types of compounds. Directed use of chemical literature is an important part of this course. Individual experimental work in the laboratory consists chiefly of preparation and purification of inorganic compounds and testing for impurities in the products.

Prerequisite: CHEMISTRY 101-102

Credit: 4 semester-hours

CHEMISTRY 510. *Food Inspection and Analysis*

A study is made of the composition of commercial food products, the laws governing purity and marketing of foods, methods of analysis of foods. Laboratory work is an extension of chemical and microscopic analysis to provide application of various analytical methods. Methods of extraction; detection of adulterants, preservatives, coloring; estimation of carbohydrates, fats, proteins, minerals, and vitamins are included in the laboratory work of the course.

Prerequisites: Organic chemistry and quantitative analysis

Credit: 4 semester-hours

SENIOR-GRADUATE COURSES**CHEMISTRY 407. *Advanced Quantitative Analysis***

This course is adapted to the needs and preparation of students. The student, after consultation with the instructor, may select analyses from the following: general or special types of oxidation-reduction; gravimetric methods; colorimetric methods; use of organic reagents in analyses; electrometric titrations; conductimetric titrations; spectrographic methods of analysis; electrodeposition of metals; and special methods of analysis.

Prerequisites: General college physics and one semester of quantitative analysis, or special permission of the instructor

Credit: 4 semester-hours

CHEMISTRY 408A. *Industrial Chemistry, Part I*

A survey is made by lectures, reports, and trips to plants of the chemical industries in the State. This section of the course stresses the importance and the characteristics of chemical industry, the

various unit operations used by the industry to carry out chemical reactions, the controls used to insure quality, the organization for research, and the type of workers employed.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 408B. *Industrial Chemistry, Part II*

This course is a study of the chemical industries of the metropolitan area utilizing the methods outlined in CHEMISTRY 408A. Also, a study is made of the economics of chemical industry, chemistry and industry in general, and the effects of chemical discoveries upon living conditions.

Prerequisites: General and organic chemistry, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 411. *Physical Chemistry, Part I*

This course, the first half of a year's work in physical chemistry, deals with gases, liquids, crystals, physical properties and electrolytes, colloids, thermochemistry, and homogeneous and heterogeneous equilibria.

Prerequisites: General college chemistry, analytical chemistry, and general college physics

Credit: 4 semester-hours

CHEMISTRY 412. *Physical Chemistry, Part II*

This course deals with electrical conductance, electrolytic equilibrium, electromotive force, electrolysis, polarization, chemical kinetics, photochemical reactions, atomic structure, molecular structure, and radio-activity.

Prerequisites: General college chemistry, analytical chemistry, and general college physics

Credit: 4 semester-hours

CHEMISTRY 413. *Atomic Structure and Atomic Energy*

Some of the topics studied include the following: discoveries leading to knowledge of the structure of the atom; bonding; geometry and structure; isotopes; nuclear fission; nuclear reactions; chemical

versus atomic explosions; the chain-reacting pile; production of plutonium; detection and measurement of nuclear radiation; atomic energy for peace-time uses; radioactive isotopes in agricultural, biological, and chemical research; and availability of materials for atomic energy.

Prerequisites: General college chemistry and general college physics, or special permission of the instructor

Credit: 2 semester-hours

CHEMISTRY 414. *Introduction to Radiochemistry*

This course is an introduction to the use of radioisotope experiments for the chemistry curriculum. The course consists of lecture and laboratory work which covers such topics as detection instruments, counting techniques, sample preparation, radiochemical separations by co-precipitation, chelation, and ion-exchange techniques.

Prerequisites: General College Chemistry, General College Physics, or special permission of the instructor

Credit: 2 semester-hours

PHYSICS

GRADUATE COURSES

PHYSICS 501. *The Teaching of Physics in Secondary Schools*

A study is made of the objectives, methods, and techniques of presentation, courses of study, lesson planning, instructional aids, and subject matter of high-school physics. Attention is given to the recent trends in developing apparatus and other equipment suitable for teaching the principles of physics. Assignments are made from recent literature on the outcomes of teaching of physics by television and by other visual aids.

Prerequisites: Sixteen semester-hours of work in physics

Credit: 3 semester-hours

PHYSICS 510. *Advanced Problems in Photography*

This course is intended to meet the needs of the camera club teacher and the hobbyist. The course includes negative and positive alterations toning, printing processes, studio portraits, color photography,

and photomicrography. The student is expected to submit prints of exhibition quality for public showing.

Prerequisites: General college physics, general college chemistry, and a first course in photography

Credit: 4 semester-hours

PHYSICS 512. *Modern Physics*

This course is a survey of recent experimental research in physics and of the newer theories concerning nuclear physics and electricity. Such topics as atomic spectra, radioactivity, artificial transmutation of the elements, and cosmic rays are discussed.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

(No credit can be given for PHYSICS 512 if student has taken PHYSICS 415.)

Credit: 4 semester-hours

PHYSICS 513. *Nuclear Radiation*

A study of the nature of radiations is made. Particular attention is given to radiation measurement technique. The course is concluded with a study of health physics as related to radiation dosages and their effects. Some attention is paid to disposal of radioactive wastes, radiation protection, and safety precautions.

Prerequisites: General college physics, general college chemistry, and a course in electrical measurements

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

PHYSICS 402. *Magnetism and Electricity*

This course consists of lectures, demonstrations, reference readings, written and oral reports, laboratory experiments with modern electrical instruments, and construction of simple electrical devices. Some of the topics studied are: modern concepts of the electronic structure of matter, electric forces, magnetic fields, potential, resistance, impedance, capacitance, and characteristics of thermionic vacuum tubes.

Prerequisites: PHYSICS 101 and 102

Credit: 4 semester-hours

PHYSICS 405. *Light and Optical Instruments*

Topics included for study in the classroom and laboratory are: the propagation of light; emission and absorption of radiant energy; reflection, refraction, polarization; spectrum analysis; photometric measurements; photoelectric cells; measurement of high temperatures; characteristics of illumination, modern illuminants; and industrial and domestic uses of light.

Prerequisites: General college physics and a course in electrical measurements

Credit: 4 semester-hours

PHYSICS 406. *Astronomy*

This is a basic course covering the fundamentals of astronomy—units, cosmology, cosmogony, stellar processes, tools and methods, the solar system, stella processes, the universe, and relativity. One purpose of the course is to furnish a description of the physical universe in which its features are shown, and to put out external environment in proper perspective.

Prerequisites: General college chemistry and physics

Credit: 4 semester-hours

PHYSICS 407. *Aviation*

This course deals with the historical development of aviation, air traffic rules, air-worthiness regulations, pilot certification, types of aircraft, aircraft structures, principles of aerodynamics, lift, drag, stability, motions of an airplane, piloting, motorless flight, aircraft

engines, power performance, types of propellers, engine instruments, and flight instruments.

Students who have taken PHYSICS 307 are not eligible to take this course.

Credit: 4 semester-hours

PHYSICS 408. *Advanced Aviation*

This course deals with the study of navigation; meteorology as applied to flight operations; radio communications; flight and navigational radio aids; instrument flight; air traffic control; jet, turbojet, and rocket flight; and recent advancements in aviation.

Prerequisite: PHYSICS 307 or PHYSICS 407

Credit: 2 semester-hours

PHYSICS 409. *Basic Electronics*

This is an introductory course in basic electronic phenomena covering such topics as elementary circuit theory, electron emission, vacuum tube characteristics, vacuum tubes as circuit elements, and gaseous discharge. The use of transistors is also considered. Applications of electronics to instrumentation, radio, and television are introduced.

Prerequisites: General College Physics and Magnetism and Electricity

Credit: 4 semester-hours

PHYSICS 410. *Meteorology*

This course is designed to develop a fuller appreciation of our atmosphere with emphasis on the meteorological applications of physical principles. Consideration is given to weather elements; the temperature effects; air currents, air masses, and frosts; the collection, dissemination, and interpretation of weather data; and the general applications of meteorology. The student is expected to learn to use meteorological instrumentation, and emphasis is placed upon the improvisation of apparatus and equipment.

Credit: 2 semester-hours

PHYSICS 411. *Photography*

This course consists of laboratory work and field work supplemented by lectures and demonstrations. Emphasis is placed on

physical principles in the construction of cameras, projection printers, tanks, and filters. Special attention is given to chemical principles in the development of films and paper, toning, intensification, and reduction.

Prerequisites: General physics and general chemistry or permission of the instructor

Credit: 4 semester-hours

PHYSICS 416. *Introduction to Analytic Mechanics*

This course includes some detailed treatment of the physics of classical mechanics, of the kinematics and dynamics of particles, and the dynamics of rigid bodies. The necessary mathematical methods of handling the data and theory are introduced and developed along with the course material. The course consists of lectures, discussions, demonstrations of practical application, and problem solving.

Prerequisite: General College Physics

Credit: 4 semester-hours

SCIENCE

GRADUATE COURSES

SCIENCE 505. *Research Seminar in Science*

This course is designed to afford opportunity for graduate students in science, supervisors, and science teachers: (1) to investigate research in science education; (2) to organize science experiences and science information with the teaching materials for the public schools. Each member of the group selects a project. This project must be presented to the science faculty and graduate students for evaluation.

Prerequisites: Matriculation for A.M. degree in science, registered concurrently for EDUCATION 503, or special permission of the instructor

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

SCIENCE 401D. *The Teaching of Aviation in Secondary Schools*

This course covers the study of State aviation programs, texts, bulletins, free material for school use, demonstration equipment, tests, working models, visual aids, and references needed to teach aero-dynamics, aircraft engines, meteorology, navigation, and aircraft communication in high schools. Field trips to airports and aviation industries are included.

Credit: 2 semester-hours

SCIENCE 409. *Senior High School Physical Science Demonstrations*

This course furnishes teachers of the physical sciences with demonstrations and experiments designed for work in high-school chemistry, physics, and applied physical science courses. A detailed study of demonstrations is made with emphasis on visibility and avoidance of failure. Emphasis is placed on sources of new demonstrations for the teacher.

Credit: 2 semester-hours

SCIENCE 410. *Junior High School Science Demonstrations*

This course covers the methods of experimental instruction in grades seven, eight, and nine. A detailed study is made of about three hundred demonstrations.

Credit: 4 semester-hours

SCIENCE 413. *Field Studies in Science: Physical*

Emphasis in this course is given to local and New Jersey geology, minerals, soils, and waters, with emphasis on the chemical and physical aspects of soil and water. Field trips are taken through the Kittatinny Mountains and to the Delaware Water Gap.

Credit: 2 semester-hours

SCIENCE 418. *Three Centuries of Science Progress*

This course includes a study of fundamental world changes that have resulted in the past three hundred years from scientific discoveries. Topics considered are the following: a background of the beliefs and practices of the age; the processes of thought which produced skepticism; the experiments devised to disprove ruling

opinions ; the new concepts arising from fresh evidence ; and the social, economic, and philosophic adjustment following the discoveries.

Credit : 2 semester-hours

SCIENCE 412. *Field Studies in Science: Biological*

Extensive instruction in the identification and natural history of fauna and flora is given in this course. Students examine the ecology of plant and animal communities (terrestrial and aquatic) and relate such communities with man's use of natural resources. The relation of field activities to present school curricula is considered. No previous science courses are required.

Credit : 2 semester-hours

SCIENCE 414. *Conservation of Plants and Animals*

The social, economic, and ecological implications of plant and animal conservation are considered together in this course. Discussion periods are interspersed with field trips to forest and wildlife management areas. Cooperating experts from state and federal agencies bring special contributions in their fields. Visual aids are used extensively.

Credit : 2 semester-hours

SCIENCE 415. *Conservation of Soil and Water*

The social, economic, and ecological implications of soil and water conservation are considered together in this course. Discussion periods are interspersed with field trips to selected areas. Outside experts bring special contributions in their fields. Visual aids are used extensively.

Credit : 2 semester-hours

SCIENCE 419. *Field Science and Conservation*

In this course students study phases of field science which are related to conservation. The components of soil and water which produce good crops are studied. Students gain an understanding of farm practices by visiting several nearby farms. Forest and wood-lot management, wildlife preservation, mineral resources use, and other important areas in which science influences the conservation of natural resources are investigated.

Credit : 2 semester-hours

SCIENCE 420. *Water Supply and Conservation Problems*

This course is designed to provide students with an opportunity to do an extensive study of the water supply problems in New Jersey and surrounding states. A study of water tables, rainfall, irrigation, drainage, flooding, water-shed management, stream pollution, and soil erosion, gives students a background for understanding the problems involved in domestic and industrial use of water. State and regional water conservation projects such as Incodel, Passaic Valley Flood Control, and Stoney Brook Water-shed are studied. Teaching materials are supplied, and methods of presenting this material to elementary and secondary pupils are demonstrated and discussed.

Credit: 3 semester-hours

SCIENCE 421. *Water Analysis and Purification*

This course covers the phases of water inspection, analysis, and purification of value in safeguarding public and private water supplies, and in securing potable water from questionable sources. The work consists of class discussions, field trips, and laboratory experiences. Field trips are to water purification plants, sewage disposal plants, and board-of-health laboratories. The laboratory work is divided between the fields of chemical and bacteriological analysis of water. The necessary bacteriological background is developed in the course. Chemical analysis includes tests for harmful impurities and hardness.

Prerequisites: CHEMISTRY 101 and 102

Credit: 4 semester-hours

COURSES OFFERED AT THE NEW JERSEY STATE SCHOOL
OF CONSERVATIONSCIENCE 405. *Field and Laboratory Studies in Science*

This integrated course is designed to show the relationship in the geological rock formations, the types of soil, water patterns, plant communities, and animal inhabitants in northern New Jersey, and the effects on human occupations. The field trips are for the purpose of gathering data and materials for intensive work in the laboratory. The experiments are designed to give the student acquaintance with the science of common but possibly unstudied features of the landscape; *e.g.*, soils are reproduced in profile and examined microscopically, physically, and chemically; water from a variety of sources is tested for biological and chemical impurities; the census of plant and animal inhabitants of typical areas is associated with relevant factors in the environment. Discussions precede and follow the field and

laboratory work to establish the probable history of the area and to suggest the probable trend, whether advancing or retrogressing, of its development. Stress is placed on the kinds of human control in specific communities which would best serve their progress.

Students are asked to submit an analysis of the geological and biological features of some known community, based on the skills and principles learned. Some other objectives of the course include an understanding of the organization of school museums for learning purposes, the making of ecological maps and illustrating them with photographs and diagrams, and the techniques of ecological field trips. Two instructors, a chemist and a biologist, collaborate in giving this course.

Prerequisite: Proficiency in biology and chemistry

Credit: 4 semester-hours

SCIENCE 411. *Problems in Field Studies in Science*

In this course each student selects a phase of field science in which he does advanced research under the guidance of the instructor. Plant ecology, bird-life, pond life, fungi, tree diseases, and insect life are a few of the areas from which the student may choose.

Prerequisites: Field Studies in Science or its equivalent plus at least 12 points of biology

Credit: 2 semester-hours

DEPARTMENT OF SOCIAL STUDIES

The teacher of social studies works in a field the boundaries of which are constantly changing and expanding. The necessity for constant study, especially with regard to the contemporary social situation and its problems, presses upon every secondary school teacher of the social studies. The Social Studies Department at Montclair intends to provide for such teachers courses of an advanced character which will help to keep them abreast of the changes in a changing society and a complex world. It also provides advanced courses for those teachers who wish to increase their preparedness in specialized secondary school subjects. Finally, it aims to provide for the teacher-in-service an opportunity for keeping informed concerning the changing techniques and problems of teaching the social studies. Selections from advanced courses of the sort just described lead to the Master's degree in the social studies.

In order to qualify for the Master's degree in social studies, candidates either prepare a thesis or pass an oral examination based upon a selected field of research.

REQUIREMENTS IN THE SOCIAL STUDIES DEPARTMENT

In general, a candidate must offer thirty-two hours of graduate credit, at least eighteen of which must be in the field of Social Studies, six in the field of Education, and six or eight (depending upon the number of social studies credits required) elective credits in fields closely related to the social studies. The following are the more specific requirements:

- I. All candidates *must* take the seminar course, SOCIAL STUDIES 600.
- II. The remaining social studies courses should represent a diversified choice from among the following fields:

Ancient and Medieval History

Social Studies 423, 425, 426, 427, 473

Modern European History

Social Studies 441, 457, 458, 493

United States History

Social Studies 408, 413, 419, 438, 447, 471, 474, 475, 480, 502, 518

The Americas

Social Studies 415, 435, 440, 453

Anthropology

Social Studies 445A, 445B, 540, 541A, 541B, 542

International Affairs

Social Studies 412, 432, 442, 451, 530

Economics

Social Studies 446, 450A, 450B, 456, 495, 517, 522, 523, 524, 525

Sociology

Social Studies 429, 439, 443, 476, 477, 482, 494, 512, 513

Political Science

Social Studies 402, 430, 433, 437, 515

Philosophy

Social Studies 404

Educational Techniques

Social Studies 503

Credits may also be chosen to the amount of six from the offerings in Field Studies.

III. All candidates must take the course, EDUCATION 503—*Methods and Instruments of Research*, and four elective credits in education selected in consultation with the Social Studies Department Chairman.

IV. Elective credits in fields other than the social studies should be selected in consultation with the Social Studies Department Chairman.

V. *Master's Thesis or Research Paper*

All candidates are required to complete either a Master's thesis or a Master's essay on a question or problem which has been chosen by the candidate and approved as a proper topic for his specialization. This project is generally initiated in the seminar course, SOCIAL STUDIES 600. The candidate is later given an oral examination on the paper before a seminar of members of the Social Studies Department. Complete directions for this requirement may be obtained from the Chairman of the Department.

In the case of candidates offering undergraduate majors from institutions other than Montclair, it may be necessary to make more specific requirements with respect to choices among social studies and elective credits than is indicated above in order to fill gaps which may exist in the undergraduate major.

GRADUATE COURSES

SOCIAL STUDIES 502. *The Origin and Development of the American Constitution*

This course is an intensive study of the origin and framing of the Constitution of the United States. It aims to search out the roots and influences that determined our basic political institutions. The seminar method is employed and attention is given to the techniques of historical research and historical writing.

Credit: 2 semester-hours

SOCIAL STUDIES 503. *Modern Social Studies Instruction and Supervision*

This course is designed primarily to assist teachers and supervisors to obtain a comprehensive view of recent curriculum trends, current subject-matter tendencies, professional literature, and problems of the teacher and the supervisor, and newer practices in secondary school social studies.

Credit: 2 semester-hours

SOCIAL STUDIES 512. *Social Legislation*

This course analyzes the social, economic, and political adjustments which have come about in our society due to technological progress.

Credit: 2 semester-hours

SOCIAL STUDIES 513. *Intercultural Relations*

This course is designed as a critical examination of the cultural reasons for many of the irritations which have created many of the tension points in the world today. It is designed to go beneath the historical causes for many of the problems around the world and to examine how subtle factors have been at work and how revolutionaries have made effective use of them to create tensions at various spots throughout the world. The course examines in detail the nature of these irritants and subtle forces in these tension spots and attempts to evaluate their effectiveness. It synthesizes anthropological, psychological, political, and historical findings from recent research in these fields.

Credit: 2 semester-hours

SOCIAL STUDIES 515. *History of Political Thought*

The major theories of representative political philosophers concerning the nature, functions, organization and sovereignty of the state are studied in this course. Among those discussed are: Plato, Aristotle, Cicero, Thomas Aquinas, Machiavelli, Luther, Calvin, Bodin, Hobbes, Locke, Spinoza, Montesquieu, Rousseau, Hume, Bentham, J. S. Mill, Burke, Hegel, Marx.

Credit: 2 semester-hours

SOCIAL STUDIES 517. *Money and Banking*

An opportunity is provided for an analysis of the monetary and banking principles and practices basic to modern economic organization. Special attention is directed to an examination of the functioning of the Federal Reserve System in relation to the gold standard, a managed currency, stability, inflation and deflation.

Credit: 2 semester-hours

SOCIAL STUDIES 518. *Recent Trends in American History (1918 to the Present)*

Without attempting to reach final conclusions, this course analyzes the major problems which have influenced American life since World War I. The new position of the nation in world affairs, the modifications of the old economic order, the progress of social and political change are all surveyed.

Credit: 2 semester-hours

SOCIAL STUDIES 522. *The Development of Economic Institutions and Ideas*

The doctrines of the more important schools of economic thought are emphasized, and the teachings of the Mercantilists, Physiocrats, Adam Smith, Malthus, Ricardo, Marx, Henry George, Veblen, Hobson, Commons, Keynes, and others are examined in relation to the important problems of money, credit, prices, business cycles, foreign and domestic commerce, property, wages, the nature of wealth and value, and economic planning.

Credit: 2 semester-hours

SOCIAL STUDIES 523. *The Economics of the Business Cycle*

The purpose of this course is to consider the nature of business cycles and their impact on the national economy, to survey business

cycle theories, and to analyze the significant proposed methods of control for the purpose of developing a desirable public program conducive to economic stability.

Credit: 2 semester-hours

SOCIAL STUDIES 524. *The Economics of Public Fiscal Policy*

Consideration is given to the various theories of justice in taxation; the incidence and shifting of the tax burden; the constitutional aspects of government finance; fiscal policy and full employment; taxation and economic inequality; the economics of public borrowing; and management of the national debt.

Credit: 2 semester-hours

SOCIAL STUDIES 525. *Workshop on Economic Education*

This workshop is designed to provide teachers, supervisors, and administrators with a better understanding of the American economy and its operation. Instruction is given by a staff of economists and curriculum specialists, supplemented by businessmen, labor leaders, and representatives of agricultural groups.

Credit: 3 semester-hours

SOCIAL STUDIES 535. *Russia in the Modern World*

Particular attention is devoted to the role played by the geographical and historical forces that have influenced Soviet foreign policy. The institutional apparatus is considered, with emphasis given to the special functions performed by such agencies as the press, the schools, and the agricultural collective. In appraising the development of Soviet foreign policy, the focus is on relations with the United States, the Soviet Union in the United Nations, and the emergence of Soviet interests in the Far East, the Middle East, and Africa.

Credit: 3 semester-hours

SOCIAL STUDIES 540. *Living Races: In the Company of Man*

This course presents a study of the physical anthropology of race: human origins; the history of racial evolution; and racial types in the modern world. The facts of race are utilized as the basis for studying race relations in contemporary society, as well as for clarifying misconceptions concerning race and intelligence, race and culture, and other related factors.

Credit: 2 semester-hours

SOCIAL STUDIES 541A. *Applied Anthropology and the Professions, Part I*

This course considers the selection and application of anthropological data for dealing with problems of contemporary life. Part I of the course presents a survey of applied anthropology *prior* to World War II. It includes consideration of early problems of theory and method in anthropology; the use of anthropology in colonial administration; and applications of anthropology in industry, Indian affairs, psychological warfare, and in the work of the United Nations.

Credit: 2 semester-hours

SOCIAL STUDIES 541B. *Applied Anthropology and the Professions, Part II*

This course presents a study of applied anthropology *since* World War II. Emphasis is placed upon the relevance today of anthropological knowledge in the professions; *e.g.*, the practical contributions of anthropology in the fields of education, human relations, health, technical assistance, and child growth and development. Problems of culture change, inter-cultural communication, cultural diversity in our schools, etc., are covered in workshop sessions utilizing school and community resources.

Credit: 2 semester-hours

SOCIAL STUDIES 542. *Africa, South of the Sahara*

The peoples and environment of Africa are studied as the basis for understanding changes taking place on the African continent today. Attention is focused on Africa's physical types, climate, history, and cultural traditions, with special emphasis being placed on culture contacts and change, and their effects on Africa, South of the Sahara.

Credit: 2 semester-hours

SOCIAL STUDIES 600. *Social Studies Research Seminar*

This seminar course is designed primarily to provide an opportunity for graduate students in the social studies to investigate and apply the techniques of research in the social studies field. Each Master's Degree candidate has an opportunity to explore materials and select an appropriate research topic for intensive study. The completed project must be presented to the social studies faculty for final evaluation and official approval no later than two months prior to the expected date of graduation.

Credit: 2 semester-hours

SENIOR-GRADUATE COURSES

For more complete descriptions see the undergraduate catalog.

SOCIAL STUDIES 402. *Foreign Governments*

This course offers students an opportunity to study the political systems of the major world powers. In each instance, political institutions are viewed against their economic and social backgrounds. Frequent comparisons are drawn between the American federal government and the foreign governments considered in this course.

Credit: 3 semester-hours

SOCIAL STUDIES 404. *The Philosophy and Interpretations of History*

It is the purpose of this course to investigate the relation of history to the other social studies and also the major attempts to find the meaning of history. A brief survey is made of the leading interpretations of philosophies of history.

Credit: 2 semester-hours

SOCIAL STUDIES 408. *A History of New Jersey*

This course is designed to assist teachers in acquiring a better knowledge of their state. A study is made of the history of New Jersey from the point of view of the social, political, economic, and cultural development of the people from the beginning of the settlement to the present. Special attention is given to the geographical and industrial aspects of the state, and the place of New Jersey in the national setting.

Credit: 2 semester-hours

SOCIAL STUDIES 412. *International Government*

The attempts of the international community of states to express itself in a formal world organization are the subject of this course. The agencies which have been established to deal with international legislative, executive, administrative, and judicial problems are studied.

Credit: 3 semester-hours

SOCIAL STUDIES 413. *Economic History of the United States*

The trends and movements in agriculture, finance, commerce, manufacturing, transportation, community, and industrial relations are

traced from their beginnings in the colonial period to contemporary times.

Credit: 2 semester-hours

SOCIAL STUDIES 415. *Latin-American Relations of the United States*

This course aims to provide the information necessary for a clear understanding and intelligent appreciation of the political, economic, and social relations that have developed between the United States and its Latin-American neighbors. The Organization of American States and other international agencies are given particular attention.

Credit: 3 semester-hours

SOCIAL STUDIES 417 and 418. *Seminar in American Government*

The content of this course is based upon the 160 telecasts of the "Continental Classroom" credit course in American Government. The course deals with the structure and functioning of government and how the United States government makes and executes policy. Weekly discussions include the content of the telecasts and the supplementary readings. An analysis of content to be presented to high school students is made. The course meets once weekly for two class hours. Each student must view these telecasts as part of the course requirements. The course follows the outline of the "Continental Classroom" telecasts. The discussion period with the instructors deals with the application of the material in the telecasts.

Credit: 3 semester-hours

SOCIAL STUDIES 419. *American Political Biography*

This is the study of the life and influence of the leading figures in American political and social history. It is the aim here to show the relation of each of these characters to the times in which he lived and to point out how he influenced the trend of American life. The study includes such leaders as Washington, Jefferson, Hamilton, Webster, Lincoln, Cleveland, T. Roosevelt, Wilson, and others.

Credit: 2 semester-hours

SOCIAL STUDIES 423. *Roman Civilization*

This course traces the social changes in Rome from the earliest times to the end of the Western Roman Empire. Attention is directed to the earliest features of Roman civilization and to the

changes—political, social, and economic—resulting from Etruscan, Carthaginian, and Greek influences.

Credit: 2 semester-hours

SOCIAL STUDIES 426. *Medieval History to 1498*

A study is made of the factors contributing to the political breakdown of the Imperial principle, the blending of Barbaric Cultures with that of the Roman, resulting in Feudalism as a way of life. Political movements, medieval commerce, guilds, the growth of towns and cultural changes are traced.

Credit: 2 semester-hours

SOCIAL STUDIES 427. *Ancient History to 378, A.D.*

The first part of this course covers the Oriental period and the Greek through the Periclean Age. Detailed study is given the Egyptian, Babylonian, and Hittite cultures, and Athenian democracy and imperialism. The second covers the Hellenistic period from the rise of Philip of Macedon, stressing attempts at federalism. It also covers Roman history, placing emphasis on republican forms and imperial experiments in governmental organization and control.

Credit: 4 semester-hours

SOCIAL STUDIES 429. *Present-Day Social Problems*

Beginning with a survey of levels of living in the United States and their relation to the distribution of wealth and income, this course proceeds with a study of poverty and crime, their sources, treatment, and prevention.

Credit: 2 semester-hours

SOCIAL STUDIES 430. *The Citizen and the State*

The emphasis is placed on government and political organizations, but the course also includes a study of the many other organizations of the community, the county, and the state that have to do with directing policy and maintaining controls. The aim of the course is to encourage intelligent appreciation and participation rather than simply to accumulate academic information.

Credit: 2 semester-hours

SOCIAL STUDIES 432. *The Twentieth Century World*

This course is designed to emphasize a topical consideration of significant movements, events, and personalities of the Twentieth

Century. Trends and topics to be studied include an historical background of the major political "isms" of the period, scientific and technological advances, social forces, economic theories and experiments. Considerable thought is given to specific contemporary problems facing the world, especially those emerging nations of Asia, Africa, and South America.

Credit: 2 semester-hours

SOCIAL STUDIES 433. *American Political Thought*

This course deals with contemporary trends and theories as they have emerged from social and economic conditions and as they are founded upon the bases laid down by Hamilton, Madison, Washington, Jefferson, Marshall, Calhoun, Webster, Lincoln, and Wilson.

Credit: 2 semester-hours

SOCIAL STUDIES 435. *Early Development of Latin America*

This course deals with Latin America from the pre-Columbian era to the end of the wars of independence. Stress is placed upon the geographical background, and the development of the Maya, Inca, and Aztec civilizations. After considering the Spanish and Portuguese backgrounds of the Latin-American people, consideration is given to the European cultures established in the New World.

Credit: 3 semester-hours

SOCIAL STUDIES 437. *The Political Party System in the United States*

Among the topics discussed are: party organization, the political boss, the political machine, party finances, the process of voting, election laws, primaries, conventions, platforms, presidential elections, majority rule, the development of the party system, sectional politics, the farm vote, the labor vote, and the future of party government in the United States.

Credit: 2 semester-hours

SOCIAL STUDIES 438. *The Literature of American History*

The purpose of this course is to familiarize the student with the writings and sources of United States history. Social, economic, political, geographic, and other interpretations are studied and compared. The writings of a selected group of representative American historians are examined.

Credit: 2 semester-hours

SOCIAL STUDIES 439. *The Family and Its Problems*

This course gives a history of the family, our American family patterns, the effects of social change, marital patterns of interaction, social roles, sources of conflicts and frustrations, divorce and desertion, special problems in family life, economics of children and the home, social legislation pertaining to family problems, marital adjustments, personality change after marriage, parent-child relationships, and personality reorientation.

Credit: 2 semester-hours

SOCIAL STUDIES 440. *Modern Latin America*

This course is designed to give an understanding of the economic, social, and political character of contemporary Latin-America. This may be considered as an area study in that geographical factors are given great emphasis, along with political considerations. The history of these nations from their wars of independence to the present serves as background for the present state of affairs in this region.

Credit: 3 semester-hours

SOCIAL STUDIES 441. *Economic History of Europe*

The study of Europe from an economic point of view is particularly important in the light of present European problems and their relation to world-wide conditions. This course is a survey of the economic life and development of Europe from the emergence of the ancient civilizations to the beginning of the modern economic world.

Credit: 2 semester-hours

SOCIAL STUDIES 442. *The Far East*

A study is made of the economic, social, and cultural situation of the Far East, with particular emphasis on the historical background of China and Japan, and of our relations with the Philippines. Oriental folkways, religion, education, population shifts, and strategic questions are discussed. This course provides an approach to the problems the United States must face in the Far East.

Credit: 3 semester-hours

SOCIAL STUDIES 443. *Youth and the Community*

This course is a sociological study of youth in its many relations to the community. Special attention is given to problems which arise in the relationship of youth and the community; e.g., juvenile delin-

quency, conditions contributing to maladjustment, poorly adjusted children, and educational and social agencies active in solving youth behavior.

Credit: 2 semester-hours

SOCIAL STUDIES 445A. *Introduction to Anthropology*

This course provides an introduction to anthropology as a field of knowledge. It surveys the biological background of culture; the pre-historic development of culture; the culture concept; and the universals of culture—*i.e.*, material culture, social and political organization, education, religion, language, and art and play.

Credit: 2 semester-hours

SOCIAL STUDIES 445B. *Introduction to Anthropology*

This course is a continuation of the study of anthropology as a field of knowledge. Among the topics considered are cultural variability; the cultural backgrounds of personality development; the life crises; the dynamics of culture change; and cultural perspectives in the modern world. A brief review of basic concepts is included for students new to the study of anthropology.

Credit: 2 semester-hours

SOCIAL STUDIES 446. *Current Problems in Economics and Government*

This course is designed to analyze the relationship of economics to government. The causes and results of governmental activity are discussed in the light of their economic significance and their bearing on public welfare.

Credit: 2 semester-hours

SOCIAL STUDIES 447. *Diplomatic History of the United States*

The purpose of this course is to show how we have become gradually conscious of our world interests and responsibilities, and the important role we have come to play in international politics. The growing concept of world democracy as opposed to commercial and military imperialism is stressed.

Credit: 2 semester-hours

SOCIAL STUDIES 448. *Cultural Diversity*

The study of primitive and folk cultures is seen in contemporary perspective. The purpose of this course is to increase student aware-

ness of the range and variety of cultures in today's world, and to improve understanding of factors which account for cultural diversity and variability.

Credit: 2 semester-hours

SOCIAL STUDIES 450A. *Modern Economic Problems and Policies, I*

The purpose of this course is to contribute to the general need for increased knowledge in the area of economic relationship, using the problem-approach method of analysis. 450A begins with a brief recapitulation of the over-all functioning of the economic system, after which the class proceeds to a detailed study of our broader economic problems and the public policies relating to them.

Credit: 2 semester-hours

SOCIAL STUDIES 450B. *Modern Economic Problems and Policies, II*

450B considers those problems associated with the world economy, international trade and exchange, monopoly and its regulations, the problems concerned with the control of public utilities, emergency price regulation and economic stabilization, labor problems, the problems of public finance, the public debt and fiscal policy, and finally, the nature of comparative economic systems and their relations with each other.

Credit: 2 semester-hours

SOCIAL STUDIES 451. *The Middle East*

This course is a survey of Indian and Moslem civilization. It shows that economic and political changes alone do not suffice to adjust the peoples of the Middle East to Twentieth-Century civilization, and that many cultural traditions must vanish while some forgotten features of the past are to be revived. Post-war planning for the region from the Near East through Persia, India, Burma, Thailand, and Malaya to the Netherland East Indies is discussed.

Credit: 3 semester-hours

SOCIAL STUDIES 453. *The Development of Canada*

This course deals with the historical background, geographical environment, governmental organization, economic behavior, and social structure of the northern neighbor of the United States. Its professional objective is to provide the understanding and appreciation necessary to students interested in the development of the Dominion

of Canada. The relationships between Canada and the United States and Canada and the British Commonwealth of Nations are stressed in this course.

Credit: 3 semester-hours

SOCIAL STUDIES 456. *International Economic Relations*

This course considers the significance of international trade and exchange to the economic life of our nation and the world economy. An analysis of the contrasting economic philosophies relating to international economic organization is made. Special emphasis is given to those policies which tend to promote freer trade, including classical doctrine of comparative costs, the Reciprocal Trade Agreements Act, and the International Bank and Currency Stabilization Fund.

Credit: 2 semester-hours

SOCIAL STUDIES 457. *Development of Russia*

Factors which shaped the Russian people are emphasized. An account is presented of Soviet internal organization, Sovkhoz, Kolkhoz, and the Five-Year plans. In addition to the historical background, Russia's great writers are discussed in the light of social and political developments.

Credit: 2 semester-hours

SOCIAL STUDIES 458. *Russia as a World Power*

An analysis of Russia's relations with China, Iran, Turkey, the European continent, England, and the United States is presented. Marxist world policy, as interpreted by Kautsky, Plekhanov, Jaures, Bukharin, Trotsky, Lenin, and Stalin is described. The changing views of the Second and Third Internationals, and the organization and methods of the Comintern are discussed.

Credit: 2 semester-hours

SOCIAL STUDIES 471. *The United States Since World War I*

The course presents an overview of the significant developments, economic, social, cultural, scientific, political, intellectual and international, that have characterized our national scene since World War I.

Credit: 2 semester-hours

SOCIAL STUDIES 473. *The Arts in Western Civilization*

This course is designed to examine how various developments in fine arts, the opera, the drama, and literature are but reflections of the major developments in the history of Western Europe. The presentation includes an examination of various historical themes or events and how the arts reflect or have treated them. It is also designed for those who wish to break across traditional discipline lines and enrich their backgrounds and information in all of these areas by showing their inter-relationships.

Credit: 2 semester-hours

SOCIAL STUDIES 474. *America in Transition*

This course surveys rapidly the results of the Civil War and then emphasizes the major trends, economic and social, which have made modern America. It is intended as a more advanced study than that which is made in the undergraduate course. The period covered is from 1867 to around 1914.

Credit: 2 semester-hours

SOCIAL STUDIES 475. *The History of American Thought*

This course considers the influential thinking in America to understand how uncertain ideas or trends of thought have grown out of situations and have in turn helped to mould the course of our history. The writings and discourses of important American thinkers are considered including Mather, Paine, Jefferson, Emerson, Thoreau, and Veblen.

Credit: 2 semester-hours

SOCIAL STUDIES 476. *Personality Development and Group Relations*

A study is made of personality growth through social contacts, the environmental factors found in the home and family, neighborhood, play, and school groups. Methods of measuring the place of the individual in the group, analysis of the group process, ways of bringing about better life adjustment, and integrating experiences are the subject matter of the course.

Credit: 2 semester-hours

SOCIAL STUDIES 477. *Rural Sociology*

During this course the student comes face to face with rural life in northern New Jersey. Social processes and problems are considered. Opportunities are provided for students to attend Grange meetings,

county fairs, rural dances and parties, and to live for a day or two with a farm family.

Credit: 2 semester-hours

SOCIAL STUDIES 480. *Social History of the United States*

This course presents a study of the social and cultural aspects of American history. As such, it supplements but does not take the place of economic and political history. The course considers population movements and growth, rural and urban social problems, status of women, family life, utopian ventures, mass media of communication, amusements and recreation, and human rights.

Credit: 2 semester-hours

SOCIAL STUDIES 482. *Conservation and Rural Economic Life*

This course provides for a study of one of the basic economic problems in America today. Land use, farm loans, price support of farm products, increased acreage production, conservation practices, are among the topics studied to give the student a better understanding of the relationship between rural and urban living.

Credit: 2 semester-hours

SOCIAL STUDIES 483. *Modern Approaches to Social Problems*

This course is designed to acquaint students with techniques and practices developed in recent years for a scientific approach to problems of human relationship. Techniques to be studied include: sampling techniques for testing large groups, questionnaires, interviewing techniques, objective observation of cultural patterns, objective observation in control laboratory situations, sociometrics, role-playing techniques, attitude testing, and use of semantic analysis in test construction.

Prerequisite: An introductory course in sociology or special permission of the instructor

Credit: 2 semester-hours

SOCIAL STUDIES 493. *Western Europe Since World War I*

This course presents an outline of the rise of communism and facism and the reaction of western democracies to these movements. The Civil War in Spain, the Munich Pact, the failure of the League of Nations, diplomatic events of the World War II era, United Nations problems, the North Atlantic Pact, and special problems of western

defense are emphasized. An evaluation of western Europe's significance for the United States is attempted.

Credit: 4 semester-hours

SOCIAL STUDIES 494. *Social Studies and Conservation*

Everyday problems of living as they are related to and affected by the wise use of our natural resources are studied in this course. The student learns about the renewable resources, soil, water, forests, and wildlife, as well as the non-renewable resources, minerals, oil, and coal. Economic, social, community, national, and individual problems are approached by giving the student firsthand experiences gained through extensive field trips in northern New Jersey. This course is of particular interest to social studies and elementary school teachers but also forms an excellent experience background for all educational fields. Methods of teaching, courses of study, and teaching units are developed.

Credit: 2 semester-hours

SOCIAL STUDIES 495. *History of Economic Thought and Development*

This course examines and compares the economic development of Western Europe since 1500 and Soviet Russia since 1917. Theories of economic development are considered concurrently. An attempt is also made to relate these theories, and the experiences of the European and Soviet type of economic systems, to problems confronting under-developed areas of the world in the Twentieth Century.

Credit: 2 semester-hours

FIELD STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 460. *Central Eastern Region*

This fifteen-day tour of Pennsylvania, Maryland, Virginia, West Virginia, North Carolina, and Tennessee covers the major points of historic interest associated with the Colonial Period, the American Revolution, and the Civil War, and the geographic features of the coastal plain, the Piedmont, the Great Valley, and the Appalachian Mountains in these states.

Credit: 3 semester-hours

SOCIAL STUDIES 461. *New England and French Canada*

This field-study course gives an opportunity to study by direct observation the historical and geographical features of New England and the Province of Quebec. This trip, occupying the twelve days immediately following the summer session, is made in a modern chartered motor coach with overnight stops at first-class hotels.

Credit: 3 semester-hours

SOCIAL STUDIES 462. *Continental United States*

This field-study course consists of sixty-two days of directed travel, including all of July and August, and provides an opportunity for gaining an integrated view of our country as a whole. All important geographic and historical features are studied under the instruction of members of the college faculty and local specialists.

Credit: 10 semester-hours

SOCIAL STUDIES 466. *Puerto Rico and the Virgin Islands*

This is a nine-day field-study course devoted to a survey of our nearest island possessions. It includes an exploration of San Juan and its vicinity, including the University, the rain forest and the submarine gardens, a two-day trip through the island visiting pineapple, coffee, sugar, textile, and rum producing areas, churches, homes, and historic places. One day is spent in St. Thomas, largest of the Virgin Islands. The trip to and from the islands is made by air.

Credit: 2 semester-hours

SOCIAL STUDIES 467. *Florida*

This is a field-study course covering the Florida peninsula including both coasts, the Everglades, and the Lake Region. Among the places visited are ancient St. Augustine; the winter playgrounds at Palm Beach and Miami; the Tamiami Trail through the Everglades; the west coast cities of Sarasota, St. Petersburg, and Tampa; and the Lake Region in the neighborhood of Lake Wales and Orlando. The trip affords opportunity for topographical, historical, and industrial studies.

Credit: 2 semester-hours

SOCIAL STUDIES 469. *Mexico*

This field-study course aims to give a comprehensive view of contemporary Mexican life with its geographic, economic, historic,

and cultural and artistic setting. Transportation to and from Mexico City is by air and in Mexico by private cars. Places visited include Xochimilco, Acolman, Teotihuacan, Fortin, Pueblo, Oaxaca, Guadalajara, Quertero, Guanajuato, Patzcuavo, San Miguel de Allende, San Jose, Purua, Morelia, Toluca, Taxco, and Cuernavaca.

Credit: 3 semester-hours

SOCIAL STUDIES 481. *The West Indies*

This course consists of ten days of directed travel in countries in the Caribbean. Transportation is by air and private car. Opportunities are given for study of geographic, historic, economic, and cultural phenomena in Puerto Rico (one day), Santo Domingo (two days), Haiti (two days), Jamaica (two days), Cuba (two days), visiting San Juan, Cuidad Trujillo, San Cristobal, Port au Prince, Kenscoff, Kingston, Havana, and rural areas in all countries.

Credit: 2 semester-hours

SOCIAL STUDIES 484. *Gulf Coast and Lower Mississippi Valley*

This is a field-study course covering the Gulf Coast from Mobile to New Orleans. It surveys economic, geographic, and historical aspects of the lower Mississippi Valley. Some places visited are Mobile, Biloxi, New Orleans, Baton Rouge, Natchez, Vicksburg, and Jackson.

Credit: 2 semester-hours

SOCIAL STUDIES 485. *Maritime Provinces of Canada*

This is a twenty-one day field-study course covering Nova Scotia, Cape Breton Island, New Brunswick, and the Gaspé. The route runs through Vermont and Quebec to the Gaspé. The history of the conflicts between the French and the English for this territory, varied geographical and scenic phenomena, and customs and daily life of French Canadian and English-speaking people of the region are observed.

Credit: 3 semester-hours

SOCIAL STUDIES 486. *World Survey*

This is a thirty-five day field-study course planned to give the student a general comprehensive vision of the kind of a world we live in with its varying culture patterns and problems. The itinerary covers the Tokyo and Kamakura area in Japan; Manila and its environs in

the Philippines; Hong Kong, and the Kowloon Peninsula in south-east China; Bangkok in Thailand, Calcutta, Delhi, Agra and Bombay in India; Cairo and Memphis in Egypt; Jerusalem and Damascus in the Holy Land; Baalbeck and Beirut; Istanbul; Athens and Corinth; and Rome.

Credit: 4 semester-hours

SOCIAL STUDIES 487. *Field Studies in the Arts: European Civilization*

This field-study course gives an opportunity to study by direct observation the development of European culture from ancient Greco-Roman civilization to modern times. It deals with Byzantine, Romanesque, Gothic, Renaissance, Baroque, and Rococo architecture and art and changes in art forms to modern times. The spectacular rise of European music since the Renaissance forms an important part of this study. The close relationship between the arts and historical and social changes in European civilization is examined.

Credit: 6 semester-hours

SOCIAL STUDIES 488. *Hawaii*

This is a twenty-day field-study course. It covers the islands of Oahu, Hawaii, Maui, and Kauai and investigates all of the major geographic, historic, economic, and cultural features of the islands. Among the high points are Honolulu and its environs.

Credit: 3 semester-hours

BACKGROUND STUDIES IN AMERICAN LIFE

SOCIAL STUDIES 492A and B. *Studies in American Life—The East and the West*

These courses comprise a unit dealing with the United States as a cultural, historic, geographic, economic, social, and political unit and, at the same time, an appreciation of regional differences which characterize American unity and diversity.

The subject matter of SOCIAL STUDIES 492A covers New England, the Central East, the South, and the Middle West east of the Mississippi River. The subject matter of SOCIAL STUDIES 492B deals with the regions west of the Mississippi.

Credit: 2 semester-hours

THE DEPARTMENT OF SPEECH

Speech education in the schools of New Jersey has received increasing recognition in recent years with the conviction that effective oral communication is important to the achievement of self-realization, vocational competency, social effectiveness, and good citizenship. Additional programs of speech are being established to provide developmental and corrective work according to each student's needs. The effectiveness of these programs depends upon the sound and extensive preparation of master teachers who can organize and supervise speech programs and who can offer dynamic leadership in helping to integrate the speech program in the over-all school curriculum.

The graduate program in speech allows qualified students to specialize in one of two areas of speech education: speech and dramatics, or speech and hearing rehabilitation.

It is expected that each graduate student will have at least one of the following goals for his work:

1. To be the director or supervisor of a speech education program in the elementary and secondary schools of a community.
2. To be further qualified as a speech therapist in schools and special institutions.
3. To increase his skill as a teacher of speech and dramatics in secondary schools.
4. To provide opportunities for the completion of requirements for certification in the state and in the national professional organization, the American Speech and Hearing Association.

In order to matriculate as a candidate for the Master of Arts degree in Speech, the applicant must have completed a minimum of eighteen semester-hours of course work, or the equivalent, from among the following areas:

Voice production ; fundamentals of speech

Phonetics

Speech correction ; speech pathology

Anatomy and physiology of the vocal and auditory mechanisms

Speech laboratory practice ; clinical practicum in speech

Oral interpretation ; choral speaking

Public speaking ; group discussion

Theater Arts

Each student must also be capable of setting a good example of acceptable speech. Each candidate will be interviewed by a speech faculty committee; and if any speech deficiencies are noted, the

candidate must correct them prior to matriculation, or accept matriculation on the condition that such correction will be made one year before the granting of the degree.

REQUIREMENTS FOR THE A.M. DEGREE IN SPEECH

Upon admission to the graduate program in speech, the student must declare his area of specialization: (1) speech and dramatics, or (2) speech and hearing rehabilitation. Each student must spend at least one summer in full-time study in the seminar course in his area of specialization.

I. <i>Professional Education Requirements</i>	S. H.
Education 503. <i>Methods and Instruments of Research</i>	2
Other education courses—to be chosen by the student in consultation with his adviser	4
Total	6
II. <i>Required of All Speech Majors</i>	
Speech 550. <i>Advanced Study of Voice and Speech Production</i>	3
Speech 592. <i>Areas and Techniques of Research in Speech and Dramatics</i> (3)	
or	3
Speech 593. <i>Areas and Techniques of Research in Speech and Hearing Rehabilitation</i> (3)	
Total	6
III. <i>Areas of Specialization</i>	
A. <i>For Students Specializing in Speech and Dramatics</i>	
Speech 567. <i>Seminar in Dramatic Production</i>	6
Speech 449. <i>Advanced Public Speaking</i> —2 s. hrs.	
or	2 or 3
Speech 462. <i>Group Discussion and Leadership</i> —3 s. hrs.	
Speech 565. <i>Advanced Oral Interpretation</i>	2
One course in speech and hearing rehabilitation	2 or 3
Electives (Chosen by the student in consultation with his adviser.)	6 to 8
Total	20
or	
B. <i>For Students Specializing in Speech and Hearing Rehabilitation</i>	
Speech 535. <i>Seminar in Speech and Language Rehabilitation</i>	6
One course in audiology	2 or 3
Speech 411. <i>Advanced Speech Pathology</i> —3 s. hrs.	
or	3
Speech 412. <i>Speech Diagnosis</i> —3 s. hrs.	
One course in speech arts	2 or 3
Electives (Chosen by the student in consultation with his adviser.)	5 to 7
Total	20
Grand Total	32

IV. *Additional Requirements*

- A. Written comprehensive examination
- B. Oral comprehensive examination
- C. Oral demonstration of communication skill—The speech faculty will arrange a committee to observe each candidate as he participates in a professional activity or program of at least thirty minutes in length. The nature, time, and place of the activity will be of the student's choosing, prior to his final semester. It may be in the form of a speech at a Parent-Teacher Association meeting or at a professional convention, a reading, a dramatization, or any combination which demonstrates the candidate's ability to exemplify good speech, and to be effective before an audience.

GRADUATE COURSES

SPEECH 522. *Advanced Phonetics*

Skill in the use of phonetics is developed further in recognizing and distinguishing acceptable English speech sounds, deviant speech sounds, regional variations in standards of American English, and sounds in foreign languages. Additional study is devoted to the stress, phrasing, and intonation patterns used in speaking English, with some analysis made of these elements in other languages.

Prerequisite: SPEECH 104 or equivalent

Credit: 2 semester-hours

SPEECH 531. *Advanced Audiology*

The purpose of this course is to increase skill in administering tests for determining pure-frequency and speech reception thresholds. Emphasis is placed on evaluation and interpretation of test results and on the analysis of client histories. Principles and techniques of hearing aid evaluation, measurement of recruitment, and tests for psychogenic deafness and malingering are studied. Consideration is also given to pre and post-surgical audiometry, and to the special problems of differential diagnosis in testing children.

Prerequisite: SPEECH 468 or a basic audiology course

Credit: 3 semester-hours

SPEECH 532. *Practicum in Speech Rehabilitation*

This course provides advanced students with the opportunities for the practical application of diagnostic and rehabilitative techniques with children and adults who have major speech and language

problems. Qualified students participate in specialized laboratory experiences which include planning and supervising speech therapy sessions, providing rehabilitative services to individuals and small groups, interviewing applicants, and administering audiometric tests.

Prerequisite: 60 clinical hours in speech practicum

Credit: 2 semester-hours

SPEECH 533. *Supervising Speech Correction Programs*

Methods of organization and administration of the speech correction and improvement programs are discussed. Emphasis is placed upon problems of screening, referral, speech-staff training and orientation, in-service courses, parent and community relations, integration with other disciplines, and development of new materials for testing, teaching, and evaluating.

Credit: 2 semester-hours

SPEECH 534. *Advanced Anatomy and Physiology of the Vocal and Auditory Mechanisms*

The basic anatomy of the mechanisms of speech reception and expression is reviewed. Consideration is also given to the integrated functioning of the central nervous system, the automatic nervous system, and the endocrine system. The effects of abnormalities of structure and function of the speech and hearing processes are emphasized. Discussion includes the medical and surgical aspects of rehabilitation, and the hygiene of the ear, nose, and throat. Demonstrations and supervised laboratory dissections are included.

Prerequisite: SPEECH 208 or equivalent

Credit: 3 semester-hours

SPEECH 535. *Seminar in Speech and Language Rehabilitation*

Graduate speech majors specializing in the speech sciences are required to devote one summer session to the study of speech and language disorders and to participate in the therapy program of the Speech and Hearing Center. Emphasis is placed upon the diagnostic, therapeutic, and evaluative techniques employed in working with children and adults who have speech disorders of organic etiology. A minimum of 135 clock hours of supervised teaching must be accumulated.

Prerequisite: SPEECH 410 or equivalent

Credit: 6 semester-hours

SPEECH 550. *Advanced Study of Voice and Speech Production*

The study is made of materials and methods used in the teaching of speech fundamentals on the junior high and senior high school levels. Review and further application of basic subject matter, including English and comparative phonetics, are stressed. Opportunities are provided for practice in improving or further developing personal voice and speech skills, in directing the practice of students with minor speech difficulties, and in phonetically transcribing speech from phonograph records or tape recordings. Some consideration is given to methods of helping students, for whom English is not a native language, to improve their voice and speech.

Prerequisite: SPEECH 100D or SPEECH 103 or equivalent

Credit: 3 semester-hours

SPEECH 563. *Scenery Design and Construction*

This course is designed to extend the advanced-speech student's knowledge in scenery design and construction techniques. Special emphasis is placed upon stage design as related to the play, the director, and the audience. The course of study includes a survey of the styles of design and the use of the perspective sketch and stage model in planning the stage setting. The application of stage construction techniques is used to demonstrate the necessity of scene design in planning the stage production. Each student is expected to design and plan the construction of scenery for a play appropriate for production in a secondary school.

Credit: 3 semester-hours

SPEECH 564. *History of the Theater*

This course is designed to give the advanced speech student a comprehensive view of the development of the theater from the Classic Greek drama through the Nineteenth Century. Special attention is placed upon plays and playwrights of the period, theater architecture, scenery, costuming, and styles of acting and presentation of each period. Course work includes oral reports, lectures, and classroom demonstrations. Advanced students may enroll with the consent of the instructor.

Credit: 2 semester-hours

SPEECH 565. *Advanced Oral Interpretation*

This course is designed to provide further study of techniques in interpretation of poetry and prose. Extensive practice is provided in

the analysis, presentation and of various types of literary material (short story, ballad, narrative, sonnet, etc.) suitable for use in the classroom and for special programs.

Prerequisite: SPEECH 106 or equivalent

Credit: 2 semester-hours

SPEECH 566. *Costume and Make-up for the Stage*

This course provides the advanced student with opportunities to design costumes and make-up for plays of various periods. Consideration is given to the use of materials, colors, and textures in achieving desired effects on the stage. Laboratory work in stage make-up is provided to develop skill in creating suitable visual characterizations.

Credit: 3 semester-hours

SPEECH 567. *Seminar in Dramatic Production*

This seminar is for advanced play-production students. It allows each member of the class to pursue projects in keeping with his own needs or interests in either the technical or directorial aspects of play production. When possible, supervisory assignments are made in connection with the current program of plays. The seminar meets four hours daily for individual project or laboratory activities, for evaluation of specific teaching problems in connection with the current plays, and for group analysis of typical production problems. Enrollment is open to matriculated graduate students in speech, or by permission of the instructor.

Credit: 6 semester-hours

SPEECH 590. *Problems in the Teaching of Speech*

This course is designed to present an analysis and investigation of the problems encountered in the speech classroom, and to survey the textbooks and teaching aids available to the teacher of speech on various grade levels. Consideration is also given to the problems of (1) motivation, (2) methodology, (3) evaluation procedures, and (4) co-curricular speech activities.

Credit: 3 semester-hours

SPEECH 591. *Organization and Administration of the School Speech Program*

This course deals with the problems of organizing and administering a comprehensive speech program in a school system. Consideration

is given to curriculum development, teacher-administration relationships, class scheduling, reports and records, in-service training, and integration of the speech program in the total school curriculum.

Credit: 2 semester-hours

SPEECH 592. *Areas and Techniques of Research in Speech and Dramatics*

Methods of research appropriate for studies in speech and dramatics are analyzed. Significant problems in the field are investigated and discussed, and published research projects are evaluated. Special attention is given to the problems of locating and utilizing professional journals and other publications for research in speech and dramatics. Each student is required to prepare an outline for a research project and to develop a bibliography for the study.

Credit: 3 semester-hours

SPEECH 593. *Areas and Techniques of Research in Speech and Hearing Rehabilitation*

Methods of research appropriate for studies in speech and hearing are analyzed. Significant problems in the field are investigated and discussed, and published research projects are evaluated. Special attention is given to the problems of locating and utilizing professional journals and other publications for research in speech and hearing. Each student is required to prepare an outline for a research project and to develop a bibliography for the study.

Credit: 3 semester-hours

SENIOR-GRADUATE COURSES

SPEECH 410. *Speech Pathology*

This course presents a study of the etiology and pathology of major language and speech disorders which may result from organic, functional, or emotional disturbances including severe stuttering, dysphonia, laryngectomy, cleft palate, cerebral palsy, and aphasia. Emphasis is placed upon diagnosis, evaluation, and rehabilitation.

Credit: 2 semester-hours

SPEECH 411. *Advanced Speech Pathology*

The purpose of the course is to provide further study and evaluation of modern techniques of speech rehabilitation, and to review research findings in the areas of voice, articulation, rhythm, and symbolization disorders. Consideration is given to the ways in which speech rehabilitation may be integrated with related health services and educational services in schools and special centers.

Prerequisite: SPEECH 410 or equivalent

Credit: 3 semester-hours

SPEECH 412. *Speech Diagnosis*

The purpose of this course is to analyze and evaluate popularly employed techniques of speech diagnosis. Commercially available diagnostic tools, as well as tests that may be designed by the therapist to meet specific needs are discussed. Consideration is also given to the dynamics of interviewing and to the reporting and interpreting of client histories. Specific methodology to be used in providing speech rehabilitation services to children and adults with speech and language disorders is evolved.

Prerequisite: SPEECH 410 or equivalent

Credit: 3 semester-hours

SPEECH 435. *Stagecraft*

This workshop course provides training in constructing and painting of scenery, and lighting the stage. A minimum of twelve clock hours in the scene shop is required.

Credit: 2 semester-hours

SPEECH 436. *Fundamentals of Stage Lighting*

The purpose of the course is to analyze the functions of light on a stage and to study and use the instruments available to achieve desired effects. Optimum and minimum equipment are studied. The laboratory work is done in the Memorial Auditorium at the College, which houses modern and flexible stage lighting equipment, and in a small auditorium with limited facilities. Students are encouraged to apply the principles of stage lighting to the specific auditoriums in which they may work. Appropriateness of lighting for different types of stage activities is a fundamental consideration in the course.

Prerequisite: SPEECH 105A or SPEECH 435 or permission of the instructor

Credit: 3 semester-hours

SPEECH 437A. *Dramatic Production Workshop*

This course is designed for those students desiring a comprehensive introduction course in theater production. Students participate as junior members of the summer-theater company. They place special emphasis upon stagecraft and lighting, or acting. In addition, they participate in the costuming, make-up, and house-management activities. The course may be used as partial fulfillment of the requirements of the undergraduate speech major or minor, or as a prerequisite to matriculation for the Master's degree in speech.

Credit: 2 semester-hours

SPEECH 437B. *Advanced Dramatic Production Workshop*

This course is a continuation of SPEECH 437A.

Credit: 2 semester-hours

SPEECH 438. *Creative Dramatics*

The purpose of this course is to study the principles and techniques of creative dramatics as they may be applied in the classroom, theater, and speech therapy program. Major emphasis is placed on materials for dramatization paralleling the mental, physical, and emotional levels of children in grades kindergarten through eight. Application of these techniques with high school students is also considered. The philosophy of creativity is discussed, and attention is given to the integration of the arts in the total educational picture. Student participation in planning and presenting demonstrations with children is an essential part of the course.

Credit: 2 semester-hours

SPEECH 439. *Workshop in Speech Correction*

This course is especially designed for students who wish to fulfill certification requirements to teach children with speech disorders or for graduate students needing to fulfill prerequisites for matriculation for the Master's degree in speech. Specialized areas in the speech sciences are offered on a workshop basis requiring attendance during all or part of the six-week summer session, depending upon the number of units elected.

Part I

SPEECH 439A. *Phonetics*

An intensive study is made of the manner and place of articulation of sounds heard in American English. Skill is developed in using the International Phonetic Alphabet to transcribe speech both prescriptively and descriptively, from live and recorded voices. Consideration is also given to the intonation and stress patterns of spoken English.

Credit: 2 semester-hours

Part II

SPEECH 439B. *Anatomy and Physiology of the Auditory and Vocal Mechanisms*

The work of this course entails a detailed study of the larynx and ear as they function in the production and reception of speech. Consideration is also given to the physics of sound and to the structure and functioning of the nervous system.

Credit: 2 semester-hours

Part III

SPEECH 439C. *Speech Pathology*

The purpose of this course is to present a comprehensive analysis of the major pathologies of articulation, voice, rhythm, and symbolization. The etiology and treatment of severe stuttering, aphasia, cerebral palsy, and the dysphonias are discussed.

Credit: 3 semester-hours

Parts IV, V and VI

SPEECH 439D. *Practicum in Speech Correction*SPEECH 439E. *Advanced Practicum in Speech Correction*

Students are required to spend forty-five clock hours in the Speech and Hearing Center for each semester-hour of credit in order to gain

experience in planning and carrying out programs in therapy with children who have speech and hearing problems. Written observation reports, lesson plans, and progress reports are required. Students also participate in staff conferences and meetings with parents of children enrolled for speech therapy. Practicum hours may also be arranged at local speech centers and hospital units.

Credit: 1 semester-hour for SPEECH 439D
1 semester-hour for SPEECH 439E

SPEECH 439F. *Voice Disorders*

The purpose of the course is to study selected disorders of voice production. Consideration is given to etiology, pathology, and therapy related to vocal nodules, contact ulcers, paralysis of the vocal cords, and other organic voice problems. Speech rehabilitation techniques for the laryngectomized, and persons with cleft palate conditions are also discussed.

Credit: 2 semester-hours

SPEECH 448. *Choral Speaking*

In a speaking choir, students acquire skill in interpreting literature suitable for group practice. Consideration is given to their use in the various grade levels in teaching. Students prepare a group of selections for their particular interests and purpose.

Credit: 2 semester-hours

SPEECH 449. *Advanced Public Speaking*

This is an advanced course in the theory and practice of public speaking. It provides opportunities for further training in more complex speech skills, especially in persuasive speaking and conducting a meeting.

Prerequisite: SPEECH 204 or the equivalent

Credit: 2 semester-hours

SPEECH 456. *Play Direction*

This course covers choosing, casting, and directing plays. Scenes are directed for class criticism, and a detailed prompt-book of one play is prepared. Whenever possible, this play is given publicly before an audience. This course complements SPEECH 435.

Credit: 2 semester-hours

SPEECH 457. *Directing the Assembly Program*

It is the purpose of this course to prepare students to organize and to conduct assembly programs and similar activities. Class lectures and discussions cover all phases of the director's responsibilities. Groups conduct research on suitable program materials and share their findings. Each student prepares a detailed script for an assembly or commencement program, or a comprehensive set of notes and materials.

Credit: 2 semester-hours

SPEECH 461A. *Practicum in Speech Correction, I*

Remedial speech laboratories are maintained at the College as a community service so that students may apply their knowledge of diagnostic, remedial, and evaluative techniques in a professional laboratory experience. Students assist staff members in demonstrations, prepare lesson plans for individual and group speech therapy, and teach under supervision.

Credit: 2 semester-hours

SPEECH 461B. *Practicum in Speech Correction, II*

Opportunities for clinical experience are provided at a hospital with children and adults who have speech and hearing problems. Provisions are made for qualified students to participate in specialized laboratory experiences which include audiometric testing, planning and carrying out therapy sessions with individual patients, and attending seminars at which physicians and other hospital personnel discuss medical, psychological, and social aspects of rehabilitation. This course is made possible through an affiliation with the Department of Physical Medicine and Rehabilitation at Mountainside Hospital in Montclair.

Credit: 2 semester-hours

SPEECH 461C. *Advanced Practicum in Speech and Hearing*

This course provides further opportunities to apply techniques of speech and hearing rehabilitation under supervision in a laboratory setting. Students are required to: (1) administer audiometric tests and speech diagnostic examinations; (2) work with parents of children who have speech disorders; and (3) assist the beginning student-speech therapist in planning and carrying out therapy sessions.

Prerequisite: SPEECH 461A and B

Credit: 2 semester-hours

SPEECH 462. *Group Discussion and Leadership*

The purpose of this course is to study the principles of democratic discussion and the methods employed in guiding and participating in the informal group discussion, and in the panel, symposium, lecture, and debate forum. Parliamentary procedure is considered. Opportunities in the application of principles and methods studied are given through student participation in discussion programs dealing with community and national problems. Attention is also given to the ways in which group discussion may be used as an effective teaching method in the general school curriculum.

Credit: 3 semester-hours

SPEECH 463. *Audio-Visual Aids in Teaching Speech*

The aim of this course is to equip prospective teachers to understand the desirable characteristics; capabilities; and all possible uses of charts, models, projection equipment, and magnetic and disc recorders, available for the teaching of speech. The distribution, cost, operation, servicing, and storing of instruments and of supplies are also considered.

Credit: 2 semester-hours

SPEECH 464. *Psychology of Oral Communication*

This course deals with the development of speech and language in the individual, and the problems of communication that lead to confusion of meaning and misunderstanding. Consideration is given to the psychology of persons who are handicapped in speech, hearing, and/or reading, including hysterical or psychogenic impairments. The contributions of learning theory, psychoanalytic theory, and semantics to the field of communication are studied.

Credit: 2 semester-hours

SPEECH 468. *Measurement of Hearing*

A comprehensive study of the measurement of hearing is made in this course with attention given to the educational implications of impaired audition and deafness. A review of the physics of sound and the anatomy and physiology of the auditory mechanism is included. Emphasis is placed on principles and techniques of screening tests, interpretation of test results, and pure-tone and speech audiometry. Demonstrations and supervised practice are provided.

Credit: 3 semester-hours

SPEECH 469. *Auditory Rehabilitation*

The purpose of the course is to study the current theories and practices of teaching speech reading and auditory comprehension to hard-of-hearing children and adults. The educational problems of helping the student to gain proficiency in speech reading as a receptive language process are discussed. Principles of auditory training are studied as a means to help develop the use of residual hearing. Emphasis is placed on the ways in which speech reading and auditory comprehension supplement each other in the rehabilitation of the hard-of-hearing individual. Practical consideration is given to the preparation of lessons for the acoustically impaired at all grade levels.

Credit: 2 semester-hours

SPEECH 470. *Argumentation and Debate*

A study is made in this course of the principles of argumentation including characteristics of propositions, definition of terms, logical organization, evidence, and oral argumentation techniques. Consideration is also given to the organization and coaching of school forensic programs. Practice and experience are afforded the student in argumentation and debate on current, significant issues.

Credit: 3 semester-hours

SPEECH 471. *Advanced Acting*

Through three areas of activity this course aims to broaden the student's appreciation of the art of acting and to increase his own acting skill. This is accomplished through individual study of established actors and schools of acting, through critiques of current acting as observed by attending professional productions, and mainly through preparation of solo and group acting exercises, both original and from established dramatic literature. As far as possible, attention is paid to the student's future professional use of the material and exercises of the course.

Prerequisite: **SPEECH 105B.** *Introduction to Dramatic Production, II*, or its equivalent, with a grade of "B" or better, is prerequisite to the course, or the student must obtain permission of the instructor before registering

Credit: 2 semester-hours

SPEECH 472. *Voice Science*

The purposes of the course are: (1) to have the student make a careful analysis of his own vocal structure and vocal habits as applied to the basic aspects and factors of sound; (2) to analyze ineffective and effective voice, characteristics of pitch, volume, and quality and work for the elimination of unpleasant elements through intensive practice; and (3) to acquire and develop control of a pleasing speaking voice in various speaking and oral reading situations.

Prerequisite: SPEECH 100D

Credit: 2 semester-hours

SERVICE COURSES FOR NON-SPEECH MAJORS

The following courses may not be taken by speech majors. Students in other departments of the College may take them for graduate credit under certain conditions. Such students are advised to check with their advisers regarding enrolling in these courses.

SPEECH 454. *Training the Speaking Voice*

This is a course in the study of the problems of speech, the development of a pleasant speaking voice with precision in diction, and the application of speech skills to practical speaking situations.

Credit: 2 semester-hours

SPEECH 466. *Speech Development: Improvement and Re-education*

This course is intended for superintendents, principals, and classroom teachers who have little or no background in speech education. Consideration is given to the following topics: (1) speech development; (2) speech difficulties or problems found on the kindergarten, elementary, and secondary-school levels; (3) acquisition of good voice and speech characteristics; (4) use of techniques and materials in classrooms to motivate good speech patterns; and (5) ways of setting up and integrating speech education in school systems. Demonstrations with individuals and groups are made, and students are expected to prepare a practical project.

Credit: 2 semester-hours

SPEECH 467. *Advanced Oral Interpretation*

This course is organized as a laboratory to help the teacher develop his potentialities in oral reading. Each student is given opportunities to read aloud and to participate in formal critiques. Assistance is given in compiling a repertory of selections most useful in daily teaching and co-curricular activities, such as, assembly programs and speech festivals.

Credit: 2 semester-hours

OTHER COURSES THAT MAY BE USED AS ELECTIVES

For more complete descriptions see the undergraduate catalog.

FINE ARTS COURSES

FINE ARTS 400. *Philosophy of Art*

This course is designed to give the student a knowledge of the various theories of art and the nature of the art experience. Readings include the works of major philosophic writers, artists, and psychologists. Through discussion each student is encouraged to develop a personal philosophy of art education.

Credit: 2 semester-hours

FINE ARTS 402. *Modern Philosophies of Art*

The work of the major writers in art in the Nineteenth and Twentieth Centuries is examined in this course. Exploration is made in the nature of the creative experience, the function of art in the life of the individual and of society, the nature of the creative process, the rise of new materials, and institutions and sentiments affecting current thinking in the field. Discussions are based on readings of philosophers, poets, social scientists, psychologists, and artists.

Credit: 2 semester-hours

FINE ARTS 409. *Industrial Design Laboratory*

A survey of the role and contribution of the industrial designer in contemporary American industry is made as an introduction to the area. This is followed by laboratory work which affords the student opportunity to solve problems in product development as they are approached by the industrial designer. Students, individually, or working as teams, consider form, function, materials, sales potential, and production problems in connection with the development of a product.

Credit: 2 semester-hours

FINE ARTS 415. *Designing in Native Materials*

In this course the student gains an appreciation and understanding of art expression growing out of the immediate environment as he

works creatively with native materials. A new respect for the potentials of raw earth products is discovered through art experiences in keeping with good conservation practices. Flower and plant arrangements for room and table decorations are studied. Digging for clay, hunting for wood, seeds, grasses, and experimenting with dyes become an exciting adventure.

Credit: 2 semester-hours

FINE ARTS 420A and 420 B. *Sculpture: General I and II*

This course provides the student with studio experiences in three dimensional expression. A variety of materials are explored including clay, plaster, metal, plastics, stone, and wood. Sculptural methods such as modeling, direct carving, construction, and casting are experienced. Special emphasis is placed on those materials and methods most applicable to the public school teaching program. In addition to the studio problems the student is required to complete text assignments and outside reading problems, make frequent museum and gallery visits, prepare written and oral reports on readings and visits, and spend additional time in designing.

Credit: 2 semester-hours each

FINE ARTS 425A and 425B. *Metalwork: General I and II*

This course introduces the student to the metals traditionally used in the shaping of useful articles and to the influence of both materials and construction on methods of design. It treats the relationships of structural and surface design as well as the techniques for developing both. It explores the role of the designer-craftsman in a technological society, the relationships of hand and machine arts, and the influence of the handicrafts on the development of taste. Research in these areas includes trips, reading, and discussion.

Credit: 2 semester-hours each

FINE ARTS 430. *Drafting and Woodwork*

This course is designed as an introduction to the basic processes in designing in wood with the use of hand and power tools. Drafting the designed pieces is integrated with the total designing process and includes the use of drawing instruments and the making of working drawings.

Credit: 2 semester-hours

FINE ARTS 435. *Costume Design*

A study of the elements of art as they determine the designing of the costume is the content of this course. Draping and construction in materials are the design approaches used to show the necessity of designing the costume in terms of the individual.

Credit: 2 semester-hours

FINE ARTS 440A and 440B. *Home Design and Community Planning, I and II*

The design of the home and the community for the full utilization of the knowledge and the resources of industry, engineering, science, and art is the content of this course. Work of leading architects and city planners is explored as it fits into the solution of the problems of interest to the student and as a reflection of our contemporary cultural patterns. Trips to sources for home furnishings, model homes, well-planned communities are included in the course activities.

Credit: 2 semester-hours each

FINE ARTS 445. *Life Drawing*

This is a course in the study of the structure and proportions of the human form with emphasis on expressiveness of drawing.

Credit: 2 semester-hours

FINE ARTS 460A and 460B. *Photography: A Contemporary Art Form, I and II*

The content of the course is predominantly creative, using the technical materials as a medium of expression and experimentation. The work of leading contemporary artists using photography as an art medium is studied.

Credit: 2 semester-hours each

FINE ARTS 474A and 474B. *Arts and Crafts in Education, I and II*

Included in this course are workshop activities in the arts and crafts of the elementary and secondary school program. Painting, drawing, modeling, pottery, weaving, papier-mache, paper sculpture, school display techniques, lettering, wood, leather, plastics, metal work, and puppetry are materials and processes which are explored.

Credit: 2 semester-hours each

FINE ARTS 490. *Art of the Nineteenth Century*

This course explores the major art movements of the Nineteenth Century in terms of the rapid changes of social, political, and artistic personalities. The rise of Classicism, Romanticism, and Realism; the salon at mid-century; the Impressionists and Post-Impressionists are discussed as well. The work of this period is studied through illustrated lectures, museum trips, readings, and discussion. The course is planned for both non-art and art majors.

Credit: 2 semester-hours

FINE ARTS 491. *Art of the Twentieth Century*

This is a course designed to survey through the use of visual materials such as slides, art films, and reproductions, and through discussion and studio participation, the major influences and trends in the development of painting, sculpture, and architecture of the Twentieth Century. It is planned for students who wish to enlarge their general education in art.

Credit: 2 semester-hours

FINE ARTS 493. *Masterpieces of World Art*

Designed for non-art majors this is an introductory course to the major art periods, movements, and works of art throughout the ages. Selected works of art from prehistoric periods, the ancient world, the Middle Ages, the Renaissance, the East, and the modern period, are studied in reference to their historical settings, the interests and ideals of their surrounding cultures, and the personality of the artist. Persistent and changing features and trends of great works of art and significant art movements are explored. The major works of art are studied through illustrated lectures, museum and gallery trips, readings and discussions.

Credit: 2 semester-hours

FINE ARTS 500. *Contemporary Art*

This course presents a survey of the major influences and trends in the development of painting, sculpture, and architecture of this century. The use of visual materials such as slides, art films, and reproductions supplement discussion and studio participation. This course is planned for students who wish to enlarge their general education in art and requires no technical competency. Not open to Fine Arts majors.

Credit: 3 semester-hours

FINE ARTS 505A and 505B. *Selected Problems in Art History, I and II*

This is a seminar course dealing with selected art problems of historic, social, and philosophical nature. Some of the following topics are chosen for a detailed examination: the human figure in the history of art, the rise of landscape painting, Impressionism in the East and West, historical views of art criticism, the self-portrait, Romanticism and Realism, art and society, the art market, the relation of painting and poetry, impact of Primitive Art on Modern Art, art and the sciences, and the rise of "Isms." Methods for dealing with selected topics include lectures, readings, reports, and discussion.

Credit: 2 semester-hours each

FINE ARTS 550A and 550B. *Print Making: Silk Screening I and II*

This course affords an opportunity to study and practice the graphic art techniques of silk screen from the creation of the master designs through the construction of necessary printing facilities and printing. Experiences include the use of tusche, glue, stencil lacquer, and photographic techniques.

Credit: 2 semester-hours each

FINE ARTS 551A and 551B. *Print Making: Intaglio Printing I and II*

This course is designed to enable the graduate student to acquire additional competency and depth of experience in etching, dry point, aquatint, and soft ground. Stress is on critical evaluation of design integrated with printing technique.

Credit: 2 semester-hours each

FINE ARTS 552A and 552B. *Print Making: Woodcut I and II*

This creative workshop course explores the fine art of woodcut, and its relation to painting in color, size, and richness. The cutting of various woods and veneers is fully demonstrated. Different approaches of printing and inventiveness in using other materials in relation to wood are fully explored. The course includes lectures on prints of the past, field trips to important print exhibitions, and an exhibition of student work.

Credit: 2 semester-hours each

FINE ARTS 553A and 553B. *Print Making: Lithography I and II*

This course is designed to provide opportunity for the student to acquire competency in the art of lithography. All steps from design and execution of master drawing to the finished print are covered. Studio experiences provide the student with first hand knowledge of tools, materials and techniques of the lithographic process. Adaptation of the lithographic phase of print making to classroom use is also studied.

Credit: 2 semester-hours each

FINE ARTS 561A and 561B. *Sculpture: Stone and Wood, I and II*

After preliminary exploration of the problems of carving in stone and wood, each student projects his work in consultation with the instructor.

Credit: 2 semester-hours each

GEOGRAPHY COURSES

GEOGRAPHY 503. *Economic Geography of the United States and Canada*

A study is made of the agricultural, industrial, and commercial development of the United States and of the geographic factors that have contributed to that development.

Credit: 2 semester-hours

GEOGRAPHY 504. *Economic Geography of Europe*

This course constitutes a study of the economic development of the nations of Europe in relation to the environmental background and resources that have made Europe one of the world's leading continents.

Credit: 2 semester-hours

GEOGRAPHY 509. *Economic Geography of Asia*

This course constitutes a treatment of the economic and commercial development of the countries of Asia in relation to their natural environment.

Credit: 2 semester-hours

GEOGRAPHY 405. *Urban Geography*

The student is introduced to the complex forces that have been and are responsible for the intense concentration of political, social, and economic activities within a small area. This area is then analyzed from the point of view of its evolution, morphology, and function. The changing characteristics of our cities, suburbanization, city-service areas, and city-hinterland interrelationships are also investigated. Special emphasis is placed upon research methods and source materials.

Credit: 3 semester-hours

GEOGRAPHY 406. *Geology*

This course deals with the earth and its geographic, stratigraphic, and structural development throughout geologic time; the record of the evolution of life as interpreted through a study of rocks and fossils.

Credit: 2 semester-hours

GEOGRAPHY 408A and 408B. *Political Geography*

This course deals with the geographic conditions influencing the significant changes in the political divisions of the world. Emphasis is placed on geographic factors influencing racial, religious, commercial, and political adjustments between nations.

Credit: 2 semester-hours each

GEOGRAPHY 409. *Economic Geography of the British Isles*

A comprehensive treatment of the resources of the British Isles is given, and the influence of the natural environment upon the utilization of those resources in the economic, social, and political development of the British Empire is evaluated.

Credit: 2 semester-hours

GEOGRAPHY 410. *Economic Geography of Caribbean America*

This is a study and interpretation of the major and important minor economic areas of Caribbean America in relation to the natural environment. Attention is also given to the historical factors which have played a part in the economic and social life of the people.

Credit: 2 semester-hours

GEOGRAPHY 411. *Historical Geography of the United States*

This course provides an opportunity for students of history, geography, and related disciplines to become familiar with the major prin-

ciples of historical geography. It emphasizes the geographic factors pertinent to an understanding of American history. Time-place relationships ranging from pre-Columbian America to the present are surveyed and analyzed critically. Particular attention is paid to source materials, to the cartography of specific times, and to geographical lore and thought.

Credit: 3 semester-hours

GEOGRAPHY 412. *Geography of Africa*

This course includes a topical and regional study of Africa. Special emphasis is placed upon the problems of economic adjustment in the tropics. Soils, vegetation, climate, physiography, natural resources, and other aspects of the physical environment are examined critically in the light of man's habitation of the continent. Relations between Africa and the rest of the world are analyzed.

Credit: 3 semester-hours

GEOGRAPHY 413. *Economic Geography of South America*

This course constitutes a study of the influence of the natural environment upon production and utilization of resources in the economic, social, and political development of the various nations of South America.

Credit: 2 semester-hours

GEOGRAPHY 414A and 414B. *Advanced Economic Geography*

This course is a study of the influence of the physical environment upon the production of, the trade in, and the utilization of the important agricultural, forest, mineral and sea products, and the manufactured commodities of the world.

Credit: 2 semester-hours each

GEOGRAPHY 416. *Conservation of Natural Resources*

This course provides an opportunity for students of the social and physical sciences to study the natural resources of the United States. Exploitation and conservation are both stressed. Our major resources are reviewed in terms of use, needs, and future developments. Consideration is given to the growth of legal and social awareness of the need for conservation practices in America.

Credit: 3 semester-hours

GEOGRAPHY 418. *Regional Geography of North America*

This course constitutes a detailed regional treatment of the continent of North America. Emphasis is placed upon the human activities of the various regions in relation to their natural environment and the relations of the regions to each other. Attention is given to the techniques of presenting the material and the use of geographic tools in the treatment of the subject-matter.

Credit: 2 semester-hours

GEOGRAPHY 419. *Geography of the Soviet Union*

This course is designed as a regional analysis of the Soviet Union. It examines critically the physical and human aspects of Soviet geography. Particular emphasis is placed on economic regions. Relations between the European states and the Soviet Union are discussed, and Russia's place in the world economy is analyzed.

Credit: 3 semester-hours

GEOGRAPHY 420. *Field Geography and Conservation*

This course constitutes a study of the relation between relief features of northern New Jersey, the location of natural resources, and the way in which land use and population distribution follow these patterns. Emphasis is given to the reading and interpretation of topographical maps and aerial photographs and to a study of the United States Geological and Soil Surveys of this region. By means of an actual land-use survey the student comes to appreciate the problems of conservation as they grow out of man's use of natural resources.

Credit: 2 semester-hours

GEOGRAPHY 421. *Population Problems of the World*

An intensive examination of the factors which influence the present-day distributional pattern of the world's people and the political, economic, and social consequences of this development are considered. Particular attention is placed on man-land relationships as related to population problems of contemporary nations.

Credit: 3 semester-hours

GEOGRAPHY 422. *Geography of the American Indian*

This course is designed to survey the culture of the American Indian (from the Ice Age to the Reservation) in relation to his geographic

environment. It affords an insight into the geography and cultural history of North America prior to the coming of the white man, deals with the problems experienced and created by alien cultures when they meet for the first time, and culminates with discussion of the Indian problems of the present day. It serves to introduce the student to methods employed in interdisciplinary attacks upon cultural problems. The views of the geologist, archaeologist, cultural anthropologist, cultural historian, as well as the geographer are critically examined.

Credit: 3 semester-hours

GEOGRAPHY 423. *The Geography of Transportation*

An intensive examination of the principles of transportation geography is provided. The different methods of transportation are studied systematically with regard to their development and present-day role in regional development. The growth of international specialization and the resulting economic development are also considered.

Credit: 3 semester-hours

GEOGRAPHY 424. *Geography of New Jersey*

This course is a detailed topical and regional study of New Jersey. Physiography, climate, soils, flora, fauna, agriculture, industry, trade, population, and relations with neighboring states are intensively studied. On the basis of the data thus examined an attempt is made to delineate the geographic regions of the state. Emphasis is placed throughout on the relationship between New Jersey's people and New Jersey's earth.

Credit: 3 semester-hours

GEOGRAPHY 425. *Geography of Exploration and Settlement*

This course is designed to survey the great age of exploration and settlement (1500-1900) of lands overseas inaugurated by the Columbian voyages. Its major themes are: knowledge concerning the lands of the earth, the unfolding of the world map, the type settlements erected by Europeans in distant lands. Special attention is given to motives for exploration, methods of navigation and travel, routes explored, and the cultural features marking European settlement.

Credit: 3 semester-hours

MUSIC COURSES

MUSIC 406. *Epochs in Musical Development, Part III*

This course is a continuation of MUSIC 208 and makes a study of the late romantic period and the rise of modern music. It includes a study of the music of Richard Strauss, Bruckner, Prokofieff, Mahler, Debussy, Tschaikowsky, Mussorgsky, Stravinsky, Schoenberg, Bartok, and Hindemith.

This course is professionalized for use in the teaching of music appreciation in the classroom.

Credit: 2 semester-hours

MUSIC 407. *The Development of the Opera*

This course deals with the origin, development, and characteristics of opera in the Italian, French, German, and Russian schools. Class analyses are made of representative operas of these schools. Special attention is given to building an ear repertory of operatic music heard over the radio.

Credit: 2 semester-hours

MUSIC 408. *Wagner Music Dramas*

This course deals with the operas and music dramas of Richard Wagner. It includes a study of Wagner's artistic ideals and their application to his compositions. Special attention is given to those works which have their sources in great literature, as the Ring of Nibelung, Parsifal, and Tristan and Isolde.

Credit: 2 semester-hours

MUSIC 413. *Masters of the Symphony*

This course helps to provide the student with an understanding and appreciation of the classic and romantic symphony through the study of the symphonies of Haydn, Mozart, Beethoven, Schubert, Schumann, and Brahms.

Credit: 2 semester-hours

MUSIC 425. *Music of the Romantic Period*

This course deals with the romantic spirit in music as expressed in the works of Schubert, Schumann, Mendelssohn, Chopin, Berlioz, Liszt, and others. It includes a study of program music, piano and

song literature, and the rise of national schools of musical composition. Representative works are studied through performance recordings, and radio listening.

Credit: 2 semester-hours

MUSIC 499A. *Problems in the Teaching of School Music*

This is a post-student teaching course. It aims to (1) evaluate student-teaching experiences; (2) give an opportunity to the student to share with his classmates the problems encountered in student teaching and seek a possible solution for the same; (3) meet shortages in teacher preparation not provided for in previous courses; (4) give the student a unified view of school-music education before he enters the teaching field. The content of this course is determined largely by the expressed needs of the students.

Credit: 2 semester-hours

MUSIC 499B. *Workshop in School Music*

This course is designed primarily for music teachers-in-service who wish to work out projects for use in their respective schools. The content of this course is determined by needs in the field. It may include folk-song dramatizations, small vocal and instrumental ensembles, the integration of music with other subjects in the curriculum, music for boys, visual aids in music pageants, festivals, and materials for special programs. This course provides the teacher with a number of units of work suitable for classroom use.

Credit: 2 semester-hours

HEALTH EDUCATION 407. *Prevention and Care of Athletic Injuries*

This is a lecture and laboratory course designed to acquaint the student with ways to prevent and to care for the common injuries sustained in athletics.

Credit: 2 semester-hours

HEALTH EDUCATION 408. *Driver Education*

Part I

This part consists of a minimum of 40 hours of class recitations and discussions for which home reading and study have been assigned. The following topics are included: (1) history and development of driver education and training programs; (2) objectives of driver education; (3) local, state, and national traffic safety programs; (4)

driver qualifications; (5) psycho-physical testing; (6) curriculum content of school courses in driver education and training; (7) construction, operation, and maintenance of automobiles; (8) traffic laws and driver licensing; (9) traffic engineering; (10) pedestrian education and protection; (11) equipment for teaching driver education; (12) liability, costs, and insurance; (13) planning driver education as a part of the daily program of the high school; (14) public relations; (15) records and reports; and (16) visual aids in teaching driver education.

Part II

This part consists of a minimum of 20 hours devoted to the following: (1) behind-the-wheel instruction; (2) demonstrations and student-teacher practice in the car; and (3) road tests in traffic. Home reading and study are required in preparation for these projects.

Prerequisite: License to drive a car with three years of driving experience with satisfactory driving record

Credit: 3 semester-hours

HEALTH EDUCATION 411. *School Health Services*

The student is familiarized with the health services available in the school. The part which the teacher plays in coordinating his activities with the school medical staff is emphasized.

Credit: 2 semester-hours

PHYSICAL EDUCATION 404. *Tests and Measurements in Physical Education*

This course is designed to acquaint students majoring in physical education with the history of measurement and evaluation in this field and to understand current trends and practices. Various tests in general qualities and traits relating to motor performance and tests relating to sports skills are presented to and administered by the students. Test evaluation and construction of written test questions are discussed. Methods of treating statistical data relating to physical education are presented.

Credit: 2 semester-hours

PHYSICAL EDUCATION 409. *Organization and Administration of Physical Education*

The details of organizing the units of the physical education programs are discussed. Various topics, such as legislation, financing,

curriculum construction, grading, excuses, plant facilities, supplies and equipment, and office management are considered.

Credit: 2 semester-hours

PHYSICAL EDUCATION 410. *Water Safety and First Aid*

This course includes intensive instruction in swimming, diving, water sports, boating, canoeing, water safety, and first aid. Students can qualify for Red Cross certificates during this course.

Credit: 2 semester-hours

PHYSICAL EDUCATION 411. *Organization and Administration of Athletics*

The purpose of the course is to offer practical suggestions and aids for the managing of affairs of an athletic program to those who expect to become teachers, supervisors, and directors of physical education.

The items discussed include athletic eligibility, management, equipment, awards, finances, budgets, safety, maintenance, planning of facilities, junior and senior high school athletics, and current athletic trends.

Credit: 2 semester-hours

PHYSICAL EDUCATION 412. *Organization and Administration of Recreation*

This course is designed to develop an understanding of the philosophy, scope and values of recreation in our contemporary life. Program planning, suitable activities for various age levels, and publicity and promotion are discussed. There are two hours of lecture-recitation per week.

Credit: 2 semester-hours

THE NEW JERSEY STATE SCHOOL OF CONSERVATION

The six State Colleges, the State Department of Education, and the State Department of Conservation and Economic Development jointly operate the New Jersey State School of Conservation at Lake Wapalanne in Stokes State Forest, Sussex County. Credit for the courses given at the New Jersey State School of Conservation may be applied toward the Master's degree at the New Jersey State Colleges, subject to approval in advance by the institution concerned. Students are advised to check with their advisers relative to the application of these credits towards graduate degrees.

The following courses may be offered at the New Jersey State School of Conservation. For complete descriptions, please refer to the departmental write-ups appearing in this bulletin. Special descriptive announcements may also be had by writing to the New Jersey State School of Conservation, Branchville, New Jersey.

FINE ARTS DEPARTMENT

- Fine Arts 415. *Designing in Native Materials*
- Fine Arts 474A. *Arts and Crafts in Education*

GEOGRAPHY DEPARTMENT

- Geography 420. *Field Geography and Conservation*

INDUSTRIAL ARTS DEPARTMENT

- Industrial Arts 442. *Conservation of Basic Industrial Materials*
- Industrial Arts 443. *The Use of Basic Industrial Materials in Industry*

EDUCATION DEPARTMENT

- Education 440. *Camping Education*
- Education 441. *Conservation Education*
- Education 442. *Practicum in Camp Leadership*
- Education 444. *Practicum in Conservation Education*
- Education 480. *Field Science for Elementary Teachers*

HEALTH AND PHYSICAL EDUCATION DEPARTMENT

- Physical Education 410. *Water Safety and First Aid*

SCIENCE DEPARTMENT

- Science 405. *Field and Laboratory Studies in Science*
- Science 411. *Problems in Field Studies in Science*
- Science 412. *Field Studies in Science: Biological*
- Science 413. *Field Studies in Science: Physical*
- Science 414. *Conservation of Plants and Animals*
- Science 415. *Conservation of Soil and Water*
- Science 419. *Field Science and Conservation*
- Science 420. *Water Supply and Conservation Problems*

SOCIAL STUDIES DEPARTMENT

Social Studies 477. *Rural Sociology*

Social Studies 482. *Conservation and Rural Economic Life*

Social Studies 494. *Social Studies and Conservation*

INDEX

	PAGE
Administration	5
Montclair State College	5
Administrative Officers—Graduate Division	5
Graduate Council	6
State Officials	5
Assistant Commissioner for Higher Education	5
Commissioner of Education	5
Director of Teacher Education and Certification	5
State Board of Education	5
Administration of Master's Degree Programs	11
Admission and Matriculation for the Master's Degree	15
Matriculation Procedures	16
Types of Admissions in the Degree Programs	17
Admission of Veterans	19
Procedures	19
Application for Conferment of A. M. Degree	21
Attendance at Commencement	21
Business Education Department	27
Course Offerings	29
Graduate Courses	29
Senior-Graduate Courses	33
Graduate Program of Studies	28
Master of Arts Degree in Business Education	28
Organization of Department	27
Certification Students	18
General Procedures	18
Master's Degree	18
Student Teaching	19
Change of Schedule or Program	26
Course Numbering System	23
Eligibility for Enrollment	23
Implications	23
Master's Degree Credit	23
Special Restrictions for Graduate Program Credit	24
Course Offerings and Scheduling	26
Education Department	37
Course Offerings and Scheduling	26
Education Department	37
Course Offerings	40
Graduate Courses	40
Senior-Graduate Courses	56
Course Requirements for the A. M. Degree in:	
Administration and Supervision	37
Personnel and Guidance	38
Organization of Department	37
English Department	65
Course Offerings	67
Graduate Courses	67
Senior-Graduate Courses	75
Organization of Department	65
Requirements for Graduate Study in the English Department	65

	PAGE
Enrollment Regulations and Procedures	25
Fees and Service Charges	25
Faculty	6
Emeritus Faculty	7
Graduate Faculty	6, 12
Library and Auxiliary Services	6
Secretarial Staff	6
Fees	25
Fine Arts Courses	153
Foreign Language Department	79
Graduate Courses in French	80
Graduate Courses in Spanish	81
Graduate Program of Studies	79
Organization of Department	79
Geography Courses	158
Health Education Courses	164
History and Development of the Graduate Division	9
Industrial Arts Department	84
Course Offerings	85
Graduate Courses	85
Senior-Graduate Courses	87
Graduate Program of Studies—Master of Arts Degree in Industrial Arts Education	84
Organization of Department	84
Information Relative to the Implementation of Program Policies	23
Change of Schedule or Program	26
Enrollment Regulations and Procedures	25
Explanation of Course Numbering System	23
Eligibility for Enrollment	23
Master's Degree Credit	23
Special Restrictions for Graduate Program Credit	24
Information as to Course Offerings and Scheduling	26
Programs, Regulations, Procedures—Subject to Change	26
Rating System	24
Retention Standard	25
Student Load	25
Withdrawal from a Course	26
Library Facilities	10
Location of College	10
Major Areas for A. M. Degree	14
Master's Degree Program Patterns	14
Area of Concentration	14
Basic Professional Education	14
General Education Electives	15
Research	14
Master's Degree Programs	11
Administration	11
Graduate Point of View	13
Implementation of Program Policies	23
Major Areas	14
Program Patterns	14
Purposes of Graduate Study	12
Requirements for A. M. Degree	19
Research and Thesis	22

	PAGE
Master's Thesis	22
Mathematics Department	89
Course Offerings	91
Graduate Courses	91
Senior-Graduate Courses	97
Organization of Department	89
Requirements for the Master's Degree in Mathematics	89
Music Courses	163
New Jersey State School of Conservation	167
Course Offerings	167
Organization	167
Other Courses That May Be Used as Electives	153
Fine Arts Courses	153
Geography Courses	158
Health Education Courses	164
Music Courses	163
Physical Education Courses	165
Physical Education Courses	165
Professional and Academic Status of the College	10
Accreditation	10
Membership	10
Purposes of Graduate Study	12
Rating System	24
Grades	24
Requirements for the A. M. Degree	19
Application for Conferment of Degree	21
Attendance at Commencement	21
Certification Evidence	21
Comprehensive Departmental Examination	20
Credit-hours—Total	19
Education Courses	19
Level of Courses	20
Major Field	19
Research	20
Residence	21
Scholastic Standards	20
Thesis	20
Time Limit	20
Transfer Credit	21
Research and Master's Thesis	22
Master's Thesis	22
Nature and Purpose	22
Residence Requirements for Master's Degree	21
Retention Standard	25
Science Department	100
Course Offerings	102
Biology	102
Graduate Courses	102
Senior-Graduate Courses	103
Chemistry	105
Graduate Courses	105
Senior-Graduate Courses	106
Physics	108
Graduate Courses	108
Senior-Graduate Courses	110

	PAGE
Science	112
Graduate Courses	112
Senior-Graduate Courses	113
Organization of Department	100
Requirements for the A. M. Degree in Science	101
Service Charges	25
Social Studies Department	117
Course Offerings	119
Background Studies in American Life	136
Field Studies in American Life	133
Graduate Courses	119
Senior-Graduate Courses	123
Organization of Department	117
Requirements in the Social Studies Department for the A. M. Degree	117
Speech Department	137
Course Offerings	139
Graduate Courses	139
Senior-Graduate Courses	144
Service Courses for Non-Speech Majors	151
Organization of Department	137
Requirements for the A. M. Degree in Speech	138
Student Load	25
Transfer of Credits for Master's Degree	21
Withdrawal from a Course	26

Philosophy Department

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